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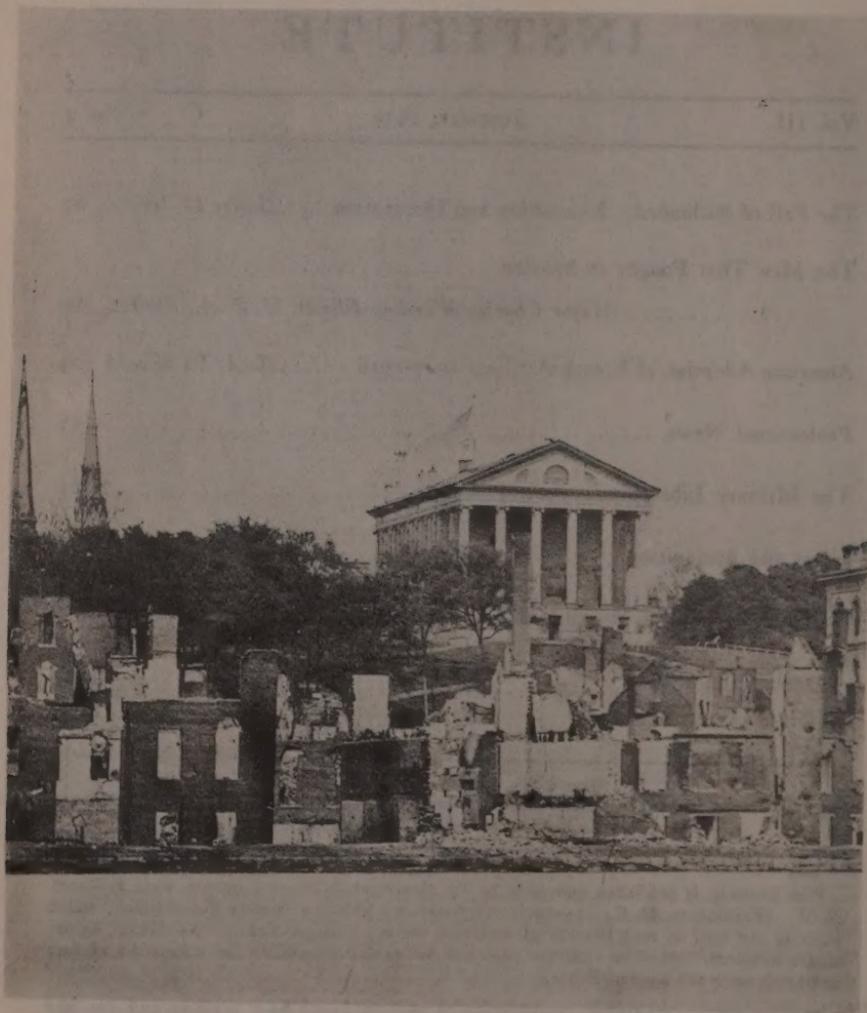
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*Photograph: Signal Corps*

RICHMOND 1865

*A view of the capital taken from the James River docks.*

# THE FALL OF RICHMOND

*Evacuation and Occupation*

By Dallas D. Irvine

**F**OR some time prior to the fall of Richmond on April 3, 1865, the probability that evacuation of the city would become necessary was well appreciated by the Confederate government.<sup>1</sup> General Lee had given it forewarning as early as the end of January,<sup>2</sup> and on February 22, after Sherman's occupation of Columbia, S. C., he advised the removal of everything of value.<sup>3</sup> The following directive was accordingly given on February 25 to the chiefs of the War Department bureaus, similar instructions probably being given orally in the other departments:

Whatever may be indispensably requisite to the current operations of the Department will be retained up to the last moment of safety, the utmost preliminary preparations for removal having first been made.

Whatever may not be deemed thus requisite will be removed without unnecessary delay to Danville, Va., or points on the railroad beyond Danville, from which they may readily be collected together. Stores and material capable of being afterward transported by wagons may, in the discretion of each chief of bureau, be removed to Lynchburg and intermediate points. Such stores and materials as cannot be otherwise transported will be sent to Lynchburg or intermediate points by canal.<sup>4</sup>

At the same time orders were issued for the removal of the stores of tobacco and cotton in Richmond and for the destruction, in event of evacuation, of what could not be carried away.<sup>5</sup> Consideration was also given to the means of maintaining order.<sup>6</sup>

<sup>1</sup> Cf. Jefferson Davis, *The Rise and Fall of the Confederate Government* (2 vols., New York, 1881), II, 667; Stephen R. Mallory, "Last Days of the Confederate Government," *McClure's Magazine*, XVI (1900), 102.

<sup>2</sup> Douglas S. Freeman, *Lee's Dispatches* (New York, 1925), pp. 329-31. Lee's warning was inspired by intelligence of the movement of the 23d Army Corps (Schofield's) by water and rail from Tennessee to Washington, an extraordinary feat, completed Feb. 1, on which see the *Official Records of the Union and Confederate Armies* (70 vols. in 128 parts, with atlas, Washington, 1881-1901), ser. I, vol. XLVII, pt. II, pp. 214-84. This compilation is referred to hereafter as *O. R.*, references being to Series I unless otherwise indicated.

<sup>3</sup> *Ibid.*, vol. XLVI, pt. II, p. 1247.

<sup>4</sup> *Ibid.*, p. 1257.

<sup>5</sup> General Lee, on Jan. 28, thinking particularly of recent and prospective operations to the southward, had asked Davis for an order requiring the destruction of all tobacco, cotton, and naval stores if and as necessary to prevent their falling into the hands of the enemy (Freeman, p. 328-29). General Orders No. 4, Adjutant and Inspector General's Office, Feb. 8, 1865, complied with this request, quoting an act of Congress of Mar. 17, 1862, which made such action mandatory (*O. R.*, ser. IV, vol. IV, p. 1066-67). Lee, on Feb. 25, instructed General Ewell to comply with this order at Richmond (*Ibid.*, ser. I, vol. XLVI, pt. II, pp. 1257, 1260-61).

<sup>6</sup> *Ibid.*, p. 1259-60.

During the next thirty days various measures were taken in execution of these instructions. Quantities of tobacco, cotton, and military stores were removed and plans made for the firing of the great tobacco warehouses. Employees of the Armory were recalled from the trenches to dismantle its machinery for shipment to Danville. Plans for the removal of certain offices were mooted; the packing of the archives was begun; and some archives were actually sent away. The necessity for evacuation did not eventuate, however, as soon as had at first been expected.<sup>7</sup>

On March 18 the Confederate Congress adjourned *sine die*, and an exodus of its members from the city began in which many other persons joined.<sup>8</sup> On March 29 Grant commenced his final flanking operations against Lee's army,<sup>9</sup> and the government departments hastened to complete arrangements for the removal of their effects.<sup>10</sup> On March 31, while the issue on the Confederate flank was being disputed at Dinwiddie Courthouse, President Davis sent his family away to Charlotte, N. C., under escort of his secretary, and in the same party Secretary of Treasury Trenholm sent his daughters off to South Carolina under escort of a midshipman to whom one of them was engaged to be married.<sup>11</sup> On March 31, also, the Treasury Note Bureau with its female clerks left Richmond for Anderson, S. C., where its printing and engraving establishment was then located.<sup>12</sup>

Next day Lee informed Davis that the military situation made it imperative to prepare at once for evacuation of the position on the James.<sup>13</sup> Sheridan, meanwhile, was crushing the Confederate right at Five Forks.<sup>14</sup> The departments

<sup>7</sup> *Ibid.*, pp. 1257, 1260, 1267; J. B. Jones, *A Rebel War Clerk's Diary at the Confederate States Capital* (new ed., 2 vols., New York, 1935), II, 434-55 *passim*; T. C. De Leon, *Four Years in Rebel Capitals* (2d ed., Mobile, 1892), pp. 353-54; Joseph R. Haw, "The Last of C. S. Ordnance Department," *Confederate Veteran*, XXIV (1926), 450; Richmond *Whig*, Apr. 10, 1865.

<sup>8</sup> *Journal of the Congress of the Confederate States of America, 1861-1865* (7 vols., Washington, 1904-05), VII, 796; W. H. Swallow, "Retreat of the Confederate Government from Richmond to the Gulf," *Magazine of American History*, XV (1886), 596; William H. Parker, *Recollections of a Naval Officer, 1841-1865* (New York, 1883), p. 348.

<sup>9</sup> *O. R.*, vol. XLVI, pt. III, p. 1362.

<sup>10</sup> Documents recovered at Richmond and published in the *New York Tribune*, Apr. 10, 1865, and *Philadelphia Press*, Apr. 11, 1865; Malvina S. Waring, "A Confederate Girl's Diary," *South Carolina Women in the Confederacy* (2 vols., Columbia, S. C., 1903-07), II, 283.

<sup>11</sup> Varina H. Davis, *Jefferson Davis, Ex-President of the Confederate States of America: A Memoir by His Wife* (2 vols., New York, 1890), II, 575-77; Burton N. Harrison, "The Capture of Jefferson Davis," *Century Magazine*, XXVII (1883), 130; J. M. Morgan, *Recollections of a Rebel Reefer* (Boston, 1917), pp. 228-30; De Leon, p. 354. The family of Secretary of Navy Mallory also left Richmond at about this time (Parker, p. 348).

<sup>12</sup> Mary Darby De Treville, "Extracts from the Letters of a Confederate Girl," *South Carolina Women in the Confederacy*, II, 184-86, 191; Waring, pp. 284-86; Jones, II, 426, 440; De Leon, p. 354.

<sup>13</sup> Freeman, pp. 358-60.

<sup>14</sup> Lee to Davis, Apr. 2, 1865, published in J. William Jones, *Personal Reminiscences, Anecdotes and Letters of General Robert E. Lee* (New York, 1874), pp. 309-11.

consequently made strenuous efforts to finish packing, working until late in the night.<sup>15</sup> The Virginia legislature at an evening session saw fit to adjourn, and most of its members left the city at once via the James River and Kanawha Canal.<sup>16</sup> The day following, which was Sunday, April 2, Grant launched a ruinous attack on Lee's attenuated center, and Davis was called from church by a telegram announcing the necessity of evacuation that night.<sup>17</sup>

There was a hurried meeting of the Cabinet, with the governor of Virginia and mayor of Richmond in attendance, after which each official set to work in his own sphere.<sup>18</sup> During the afternoon the principal effects of the government offices were hauled to the Danville depot and loaded on the cars. Included were the more important remaining archives and the gold and silver in the Treasury. To guard the latter the Confederate midshipmen were ordered up to the depot from their quarters down the river. The specie reserves of the Richmond banks were loaded on the same train and fell under the same protection.<sup>19</sup>

To insure the preservation of order during the night orders were issued for the assembly of the Local Defense Brigade, composed mainly of government clerks and munitions workers.<sup>20</sup> Directions were also given for the destruction of the Confederate navy on the James and for the removal to Lynchburg, in canal boats, of whatever munitions and equipment could still be saved from the Arsenal.<sup>21</sup> Large quantities of ammunition which could not be carried away

<sup>15</sup> Swallow, pp. 596-97.

<sup>16</sup> Richmond *Times*, Apr. 21, 1865; Richmond *Dispatch*, Apr. 3, 1865.

<sup>17</sup> Douglas S. Freeman, *R. E. Lee, A Biography* (4 vols., New York, 1934-35), IV, 47-52; O. R., vol. XLVI, pt. I, p. 1264; Dunbar Rowland, *Jefferson Davis, Constitutionalist: His Letters, Papers and Speeches* (10 vols., Jackson, Miss., 1923), VI, 532; Mallory, p. 100; Charles Minnegerode, "My Dead Hero," in *Life and Reminiscences of Jefferson Davis by Distinguished Men of His Time* (Baltimore, 1890), pp. 233-35; Dallas Tucker, "The Fall of Richmond," Southern Historical Society, *Papers*, XXIX (1901), 153-56. There are many other eye-witness accounts of the scene in St. Paul's Church beside the last three citations.

<sup>18</sup> Davis, II, 667; Mallory, p. 100; John H. Reagan, *Memoirs, with Special Reference to Secession and the Civil War* (New York, 1906), p. 197.

<sup>19</sup> Documents published in New York *Tribune*, Apr. 10, 1865; instructions to Walter Philbrook, chief teller, published by him in New York *Times*, Jan. 6, 1886; John F. Wheless in So. Hist. Soc., *Papers*, X (1882), 138-39; John W. Harris, "The Gold of the Confederate Treasury," *ibid.*, XXXII (1904), 159-60; Haw, p. 450; Parker, p. 350; Swallow, p. 597; Mallory, p. 102; Susan L. Blackford, *Memoirs of Life in and out of the Army in Virginia during the War between the States* (2 vols., Lynchburg, Va., 1894-96), II, 276-77.

<sup>20</sup> Clement Sullivane, "The Fall of Richmond: I. The Evacuation," *Battles and Leaders of the Civil War* (4 vols., New York, 1887-88), IV, 725; Miles Cary, "How Richmond Was Defended," *Confederate Veteran*, XV (1907), 557.

<sup>21</sup> Raphael Semmes, *Memoirs of Service Afloat* (Baltimore, 1869) pp. 809-10; William L. Broun, "Confederate Ordnance during the War," *Confederate Veteran*, XII (1904), 23. The Ordnance Bureau, with such personnel and matériel from the Armory and Laboratory as could be gathered, was to go to Danville by train (Haw, p. 450; Harrison, pp. 131-32; Mrs. Amelia Gorgas, "The Evacuation of Richmond," *Confederate Veteran*, XXV (1917), 110).

were dumped in the river, and masses of papers from various offices were set on fire in the streets.<sup>22</sup> As far as the very limited means of transportation would permit, supplies for the army were withdrawn from the commissary depot, while from the bulk of supplies that could not be transported quantities were occasionally issued to such townspeople as presented themselves.<sup>23</sup>

About dark<sup>24</sup> the government assembled at the depot, where a number of trains had been provided to carry it to Danville. A great many other persons also congregated there in the hope of obtaining places in the cars, but the midshipmen were posted to restrain the crowd and prevent the entrainment of such as could not show or obtain proper authorization. After a considerable delay, while the President and Cabinet waited in hope of better news from Lee, the passenger train bearing the higher officials pulled out, to be followed at intervals by trains of freight cars carrying the impedimenta and minor personnel. The last of these trains, which got off shortly before dawn, carried the government's treasure under guard of the midshipmen. Secretary of War Breckinridge, with the Quartermaster General, Commissary General, and Chief of Engineers, did not accompany the government but remained behind to assist in supervising evacuation by the army.<sup>25</sup>

In the meantime a meeting of the city council had determined to destroy all liquor in the hope of preventing the aggravated disorders which could be expected to result from the troops of either army becoming intoxicated. Committees appointed for this purpose set to work toward midnight, but liquor was apparently ubiquitous in large quantities, and their activities, along with similar activities of the military authorities, only served to call it to the attention of the crowds which circulated in the streets in search of spoils. From the fountains of emptying barrels and the rivulets which flowed in the gutters they easily obtained it, and disorder was let loose. At the same time a greater danger preëempted the attention of the city officials, for it was learned that

<sup>22</sup> Broun, p. 23; De Leon, p. 356; W. L. Timberlake, "Last Days in Front of Richmond," *Confederate Veteran*, XX (1912), 219; E. T. Waterhall, "Fall of Richmond, April 3, 1865," *ibid.*, XVII (1909), 215; Tucker, p. 153.

<sup>23</sup> *Richmond Times*, Apr. 21, 1865; *Richmond Whig*, May 11, 1865; *Philadelphia Press*, Apr. 10, 1865; Sullivan, p. 725; E. M. Boykin, *The Falling Flag* (New York, 1874), p. 7; Waterhall, p. 215; Broun, p. 23; De Leon, p. 356; J. B. Jones, II, 468.

<sup>24</sup> It is not possible to fix the events of this cataclysmic night in time—either relatively or by hour of the clock—with exactitude or any high degree of reliability, for the recorded recollections of witnesses are generally indefinite and otherwise hopelessly inconsistent with respect to time and sequence.

<sup>25</sup> Mallory, p. 102-03; Parker, pp. 351-53; John Leyburn, "The Fall of Richmond," *Harper's Magazine*, XXXIII (1866), 93-94; Swallow, p. 597; Haw, p. 450; Harris, p. 160; H. W. Bruce, "Some Reminiscences of the Second of April, 1865," *So. Hist. Soc., Papers*, IX (1881), 209; J. B. Jones, II, 466; Blackford, II, 276-77; *O. R.*, vol. XLVI, pt. I, p. 1265; I. M. St. John, "Resources of the Confederacy in 1865," *So. Hist. Soc., Papers*, III (1877), 102.

orders had definitely been issued to fire the tobacco warehouses. Vigorous remonstrances are said to have been made without avail.<sup>26</sup>

Military authority in the city resided in Lieutenant General R. S. Ewell as commander of the Department of Richmond and of the troops remaining on the north side of the James. Upon him devolved the responsibility for maintaining order. He was handicapped, however, by lack of adequate means. During the preceding afternoon and evening it had been found impossible to assemble any large part of the Local Defense Brigade, for under the circumstances the services of the clerks and mechanics composing it were indispensable to the departments.<sup>27</sup> The midshipmen had been assigned to convoy the Treasury, and part of the small force assembled from the Local Defense Brigade had also been required at the depot. The provost guard (2d Battalion, Virginia Reserves) could spare few men from the execution of various measures of destruction and the task of removing the inmates of the military prisons (Libby Prison and Castle Thunder).<sup>28</sup> A sizeable force of convalescents from the hospitals had been sent to the front lines twenty-four hours earlier, along with the cadets of the Virginia Military Institute, also quartered in the city, to relieve one of Longstreet's divisions. Both the convalescents and the cadets were ordered back to the city as soon as it was dark, but they did not arrive for some hours and the cadets were disbanded immediately upon arrival. In the meantime only a few men of the Local Defense Brigade and provost guard were available to assist the meager police in maintaining order.<sup>29</sup>

At first they were more or less successful, but soon after midnight the streets in the business district filled up with a mob which could not be dispersed and which became increasingly riotous. Townspeople of both sexes and all colors mingled with stragglers, deserters, and hoodlums, all moved by long experience of deprivation to lay hands upon whatever goods they could during the debacle. Around two or three o'clock in the morning this mob began to break into the

<sup>26</sup> *Richmond Times*, Apr. 21 and 22, 1865; *New York World*, Apr. 8, 1865; *Philadelphia Press*, Apr. 10, 1865; De Leon, p. 356. The city council had been notified in February of the intention to burn the tobacco warehouses, so that it cannot be supposed that the order came as a surprise (*O. R.*, vol. XLVI, pt. I, pp. 1292-93, pt. II, pp. 1260, 1267). Governor Smith left the city for Lynchburg in the early morning, riding up the towpath of the canal (*Richmond Times*, Apr. 21, 1865; *Richmond Whig*, May 11, 1865). A whole host of people fled from the city during the night by way of this towpath, the canal itself, and all the open roads (Swallow, p. 597; Blackford, II, 277).

<sup>27</sup> The Local Defense Brigade was composed of an Iron Works Battalion, Arsenal Battalion, Armory Battalion, and Departmental Battalion (Cary, p. 557).

<sup>28</sup> The prisoners were taken down the river and exchanged during the afternoon (*New York Times*, Apr. 6, 1865).

<sup>29</sup> *O. R.*, vol. XLVI, pt. I, p. 1293, pt. II, 1259-60, pt. III, pp. 1374-80; Sulivane, p. 725; R. T. W. Duke, "Burning of Richmond," *So. Hist. Soc. Papers*, XXV (1897), 134; *idem*, "With the Confederate Reserves," *Confederate Veteran*, XXVI (1918), 486-87; E. H. Wood, "More of the Last Defense of Richmond," *ibid.*, XVI (1908), 397; Jennings C. Wise, *The Military History of the Virginia Military Institute from 1839 to 1865* (Lynchburg, Va., 1915), pp. 415-17; Timberlake, p. 119; Mallory, p. 102; J. B. Jones, II, 466. Most of the cadets left via the canal and towpath.

shops of "speculators," and a general plundering of the business district was soon under way which the convalescent corps was unable to stop. General Ewell therefore hurried forward two battalions of General Kershaw's Division to suppress the disorder. This was accomplished in some fashion before daylight, as Kershaw's Division began to pass through the city and over the river, but, apparently not before some fires had been set by the mob.<sup>30</sup>

About half an hour before daylight there was a flash and tremendous concussion from down the river, caused by the blowing up of the ironclad *Virginia* at Drewry's Bluff. The explosion of two other ironclads followed.<sup>31</sup> At about the same time the tobacco warehouses and railway bridges were fired by the military and orders issued for the blowing up of the powder magazine on the north side of the city.<sup>32</sup> The latter exploded with a terrific shock just as it had become light enough to see clearly.<sup>33</sup> By that time the fires in the lower city were burning briskly under the impulsion of a fresh south wind, and the flames from the Petersburg railway depot were being communicated to the neighboring Arsenal.<sup>34</sup> Before long a continual detonation of shells and cartridges was giving a full-scale imitation of the sound of battle, while columns of flames swarmed up and over various prominent buildings. The explosions at the Arsenal, which threw burning coals and brands over a wide area, combined with the strong breeze to cause a rapid spread of the fire.<sup>35</sup>

In the meantime the remnant of the Local Defense Brigade had been posted

<sup>30</sup> O. R., vol. XLVI, pt. I, pp. 1283, 1293-94; Sulivane, p. 725; "A Confederate Courier's Experience," quoted in C. C. Coffin, *Freedom Triumphant* (New York, 1891), pp. 425-27; Richmond *Times*, Apr. 22, 1865; Wood, p. 397. The contention of the military that fires were set by the mob is probably true, though it can hardly be proven. In considering the question it should be taken into account that the city was lighted by gas. According to some testimony the gas was turned off, while other evidence would indicate that it was not (Watehall, p. 215; Broun, p. 23; Coffin, p. 426; Wood, p. 397). Watehall gives a graphic account of how the plunderers used a great many paper torches or "flares" to obtain light inside buildings being looted. A small bridge over the canal, giving access to Mayo's Bridge, caught fire from a canal boat, to the great alarm of Ewell, who supposed incendiaries were trying to cut off his retreat. Actually, the fire seems to have been the result of an accident (O. R., vol. XLVI, pt. I, pp. 1283, 1293-94; Watehall, p. 215; Edward P. Alexander, *Military Memoirs of a Confederate* [New York, 1907], p. 594).

<sup>31</sup> Semmes, pp. 811-12; Boykin, pp. 9-10; Leyburn, p. 94; Parker, p. 353; Broun, p. 23.

<sup>32</sup> Duke, "With the Confederate Reserves," loc. cit., p. 487; Timberlake, p. 119; Watehall, p. 215; Wood, p. 397; Sulivane, p. 725. Duke, who commanded the provost guard, testifies to the receipt of a written order to fire the warehouses at a given signal. Timberlake testifies to the actual firing of a warehouse by soldiers of the provost guard.

<sup>33</sup> Mrs. Fannie W. Miller, "The Fall of Richmond," *Confederate Veteran*, XIII (1905), 305; John R. Southall, "Recollections of the Evacuation of Richmond," ibid., XXXVII (1929), 37; Leyburn, p. 94; Tucker, p. 157; Broun, p. 23. The magazine had been ordered blown up at 5 o'clock; twilight began theoretically at about 4:30 A. M. (mean local time).

<sup>34</sup> Richmond *Times*, Apr. 22, 1865; Philadelphia *Press*, Apr. 8, 1865; W. T. Robins in So. Hist. Soc., *Papers*, XXIII (1895), 178; Tucker, p. 157; De Leon, p. 361; Watehall, p. 215. The firing of the Arsenal was not intended by the military authorities (Broun, p. 23). Ewell assumed that it was fired by the mob (O. R., vol. XLVI, pt. I, p. 1293).

<sup>35</sup> Sulivane, pp. 725-36; Watehall, p. 215; O. R., vol. XLVI, pt. I, pp. 1283, 1294; Coffin, p. 429; Southall, pp. 37-38.

at the head of Mayo's Bridge to guard against supposed incendiaries and hold the way open for the retreat of the cavalry rear-guard under General M. W. Gary.<sup>36</sup> Generals Ewell and Breckinridge crossed the bridge in the early light with their staffs, each pausing for a time to review the marching troops.<sup>37</sup> Wooden gunboats bearing the sailors of the James River Squadron, under Admiral Semmes, also appeared and lay by at the bridge awaiting an opportunity to pass the draw. About sunrise the last of Kershaw's infantry got across, with the last of Alexander's corps artillery, and the sailors passed through to land in Manchester, on the other side of the river.<sup>38</sup> To the retreating army as it turned for a last look on the Confederate capital from the hills above Manchester, the whole waterfront appeared to be in flames.<sup>39</sup>

Behind those flames the Richmond mob was loose again. At daylight it had concentrated in the vicinity of the great commissary depot at 14th and Cary Streets, awaiting the moment when the guards would be withdrawn and the depot abandoned. At the last the authorities dumped into the streets a large supply of liquor stored on an upper floor and attempted to carry out a distribution of supplies. But the scrambling mob soon got out of all control and swept into the depot to help itself. It was then sunrise and the last of Kershaw's troops were trudging across the bridge.

Before very long the mob was driven from the commissariat by the spreading conflagration, but other repositories of goods which stood in the way of the flames were successively thrown open or forcibly entered, so that a veritable orgy of pillaging proceeded in advance of the fire. An additional portion of the populace, aroused by the morning's explosions and attracted by the smoke and commotion, rapidly joined the mob, including a host of children and, eventually, the inmates of the neighboring state penitentiary, who broke out about 8 A. M. Under the circumstances any effort to turn out the disorganized fire department would have been futile. Moreover, the mayor and a committee of the city council had gone out to the lines to surrender the city, so that no semblance of authority remained. The fire consequently swept upward from the lower city quite unrestrained.<sup>40</sup>

<sup>36</sup> Sulivane, p. 725.

<sup>37</sup> Coffin, pp. 428-29. General Breckinridge moved with his staff to Amelia Springs for a conference with Lee, later rejoining the government at Greensboro, N. C. (St. John, p. 102; Rowland, VI, 543).

<sup>38</sup> Alexander, p. 594; Semmes, p. 812. Semmes' sailors, after some difficulty in finding a serviceable locomotive, made up a train in Manchester and proceeded to Danville by rail, where Semmes reported to the Secretary of Navy and was assigned with his command to the defenses of that town (*ibid.*, pp. 812-17). General G. W. C. Lee's Division crossed the James on a pontoon bridge near Chaffin's Bluff (*O. R.*, vol. XLVI, pt. I, pp. 1294, 1296; John W. Atkinson in So. Hist. Soc., *Papers*, XXIII [1895], 177).

<sup>39</sup> Coffin, p. 429; Duke, "Burning of Richmond," *loc. cit.*, p. 135; Boykin, p. 75; Alexander, pp. 594-95; *O. R.*, Vol. XLVI, pt. I, p. 1294.

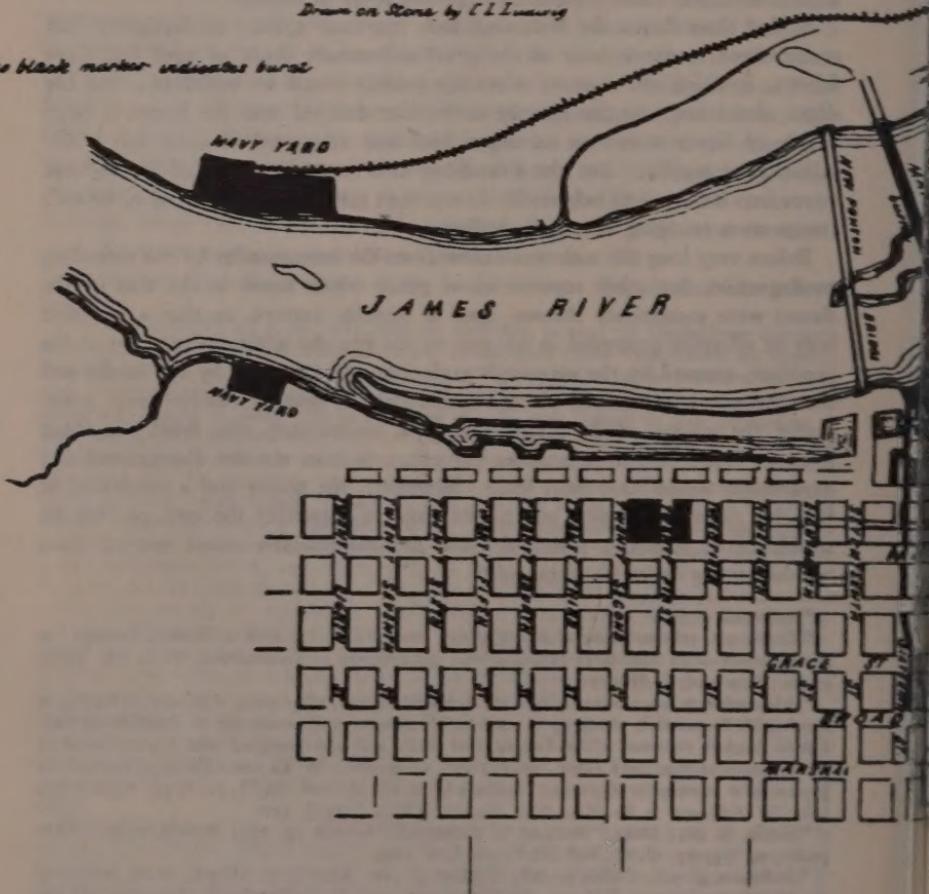
<sup>40</sup> Sulivane, p. 726; Coffin, p. 428; Tucker, p. 158; John L. G. Woods, "Last Scenes of the War," *Confederate Veteran*, XXVII (1919), 141; I. G. Bradwell, "Last Days of the Confederacy," *ibid.*, XXIX (1921), 57; Harris, pp. 158-59; *Richmond Times*, Apr. 21, 22, and 25, 1865.

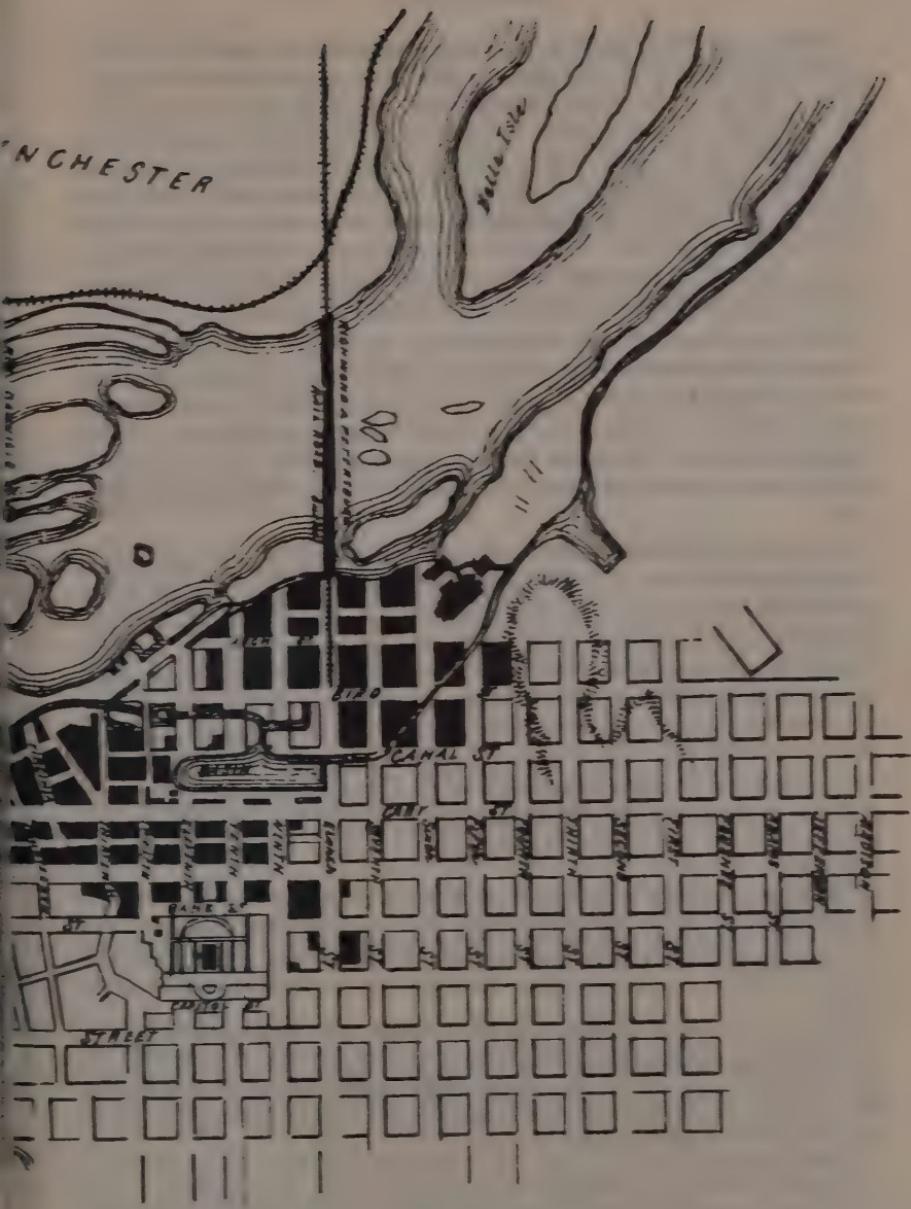
MAP  
of a part of the  
CITY OF RICHMOND  
showing the burnt Districts

Published by Wm Ira Smith proprietor Richmond Whig.

Drawn on Stone, by C.L. Morris

The black marker indicates burnt





Around 7 o'clock<sup>41</sup> the head of Gary's cavalry column appeared on Main Street, forcing its way through the mob. The best part of an hour was required for it to get across the bridge. Simultaneously the troops of the provost guard were assembled, to be withdrawn with the last of the cavalry around 8 o'clock. The remnant of the Local Defense Brigade was then withdrawn in turn, and the engineer officer on duty proceeded to set his torch to the combustibles which had been distributed along the bridge to insure its burning. As the island in midstream was reached, a party of Union cavalry was seen moving up Main Street. Presently a few shots were heard, which the Confederates lingering at the middle of the bridge supposed were fired at themselves.<sup>42</sup>

During the night the corps of convalescent had become hopelessly scattered as a result of its endeavors to police the city. With a few remaining men, however, its commander had just moved down to 11th and Main Streets, where he greeted the Union cavalry party with lead. These were supposedly the last shots fired in defense of the city. After making this gesture the little group at once dispersed in order to escape, and the evacuation of Richmond was complete.<sup>43</sup>

Some four or five hours earlier, while it was yet night, Mayor Joseph Mayo and his deputation had driven out of the city to post themselves on the second line of fortifications at a point just beyond the junction of Osborne Turnpike and Newmarket Road, these being the avenues by which the enemy could be expected to advance. By that time the Union troops north of the James, commanded by Major General Godfrey Weitzel, had discovered the withdrawal of the Confederates and were preparing to advance. The fields of land mines protecting the Confederate works made it unsafe, however, to move before it was fully daylight. The Union outposts picked their way carefully forward in the first gray of dawn, but the rest of the troops were held back until the sun had risen.<sup>44</sup>

<sup>41</sup> What has previously been said (note 24) about the difficulty of establishing the time of occurrences during this night and morning may be reiterated here with the remark that it is especially difficult to reconcile the times given in Union and Confederate accounts for the final events of evacuation and the early events of occupation. It is obvious that everyone concerned was too excited or preoccupied to have any trustworthy apperceptions of time.

<sup>42</sup> Boykin, pp. 12-15; J. H. Doyle, "When Richmond Was Evacuated," *Confederate Veteran*, XXXIX (1931), 205; Timberlake, p. 119; Duke, "Burning of Richmond," *loc. cit.*, p. 134; Sulivane, p. 726; *idem*, "Last Soldiers to Leave Richmond," *Confederate Veteran*, XVII (1909), 602; O. R., vol. XLVI, pt. I, p. 1213; Richmond *Whig*, Apr. 6, 1865. The party of Union cavalry was undoubtedly that of Major A. H. Stevens, mentioned in a subsequent paragraph.

<sup>43</sup> Wood, p. 397.

<sup>44</sup> *Richmond Times*, Apr. 22, 1865; affidavit of James A. Scott in So. Hist. Soc., *Papers*, XXIII (1895), 180-81; De Leon, p. 360; *Philadelphia Press*, Apr. 10, 1865; *New York Times*, Apr. 6, 1865; *New York World*, Apr. 8, 1865; O. R., vol. XLVI, pt. I, pp. 1211-12, pt. III, p. 539; Silas Adams, "The Capture of Richmond," *Military Order of the Loyal Legion, Maine Commandery, War Papers*, III (1908), 253.

About 6 o'clock, as his troops moved forward, General Weitzel sent ahead his provost guard, consisting of two companies of the 4th Massachusetts Cavalry under Major A. H. Stevens, provost marshal, to receive the surrender of the city and to see to the destruction of all liquor. The surrender was accomplished when Stevens encountered the mayor's party. Afterwards Stevens' detachment rode first into the burning city at about 7:30 A. M. Moving up Main Street and then over to the Capitol, it proceeded to raise the Stars and Stripes above that building a little after 8 o'clock.<sup>46</sup>

Meanwhile the divisions of Generals Devens and Kautz pushed rapidly along Osborne Turnpike and Newmarket Road, respectively, in competition for the honor of prior entry into the city. At the junction of the two roads their advance elements became partly interspersed, but all troops were brought to a halt at the outskirts of the city on an order transmitted by Stevens in accordance with previous instructions. Since Kautz' Division was composed of colored troops, and since the first unit into a captured place was entitled by military custom to furnish the provost guard, Weitzel saw fit to direct that Devens' Division should enter first.<sup>47</sup>

Weitzel rode into the city at about 7:40 and at 8:15 himself received the surrender at the city hall. Immediately afterward he established temporary headquarters in the Capitol and prepared to deal with the calamitous situation existing. Presently his column of infantry appeared. With bands playing the patriotic and nostalgic airs of the period, regiment after regiment, white and colored, tramped up to the Capitol Square through a throng of colored folk dazed but intoxicated by the thought of what this coming meant for them. In the Square were a great many people who had fled from their upstairs quarters in the downtown district, with such household goods as they could save, in order to escape the conflagration. Over the Square and neighboring streets was a thick litter of papers torn from the various government offices. In the background was an inferno of roaring fire, rolling smoke, crumbling walls, and incessant explosions. It was a scene of terrible splendor which etched itself for life long upon the memories of all who beheld it. Its climax was undoubtedly the moment when the colored cavalry regiment of Charles Francis Adams, Jr., debouched at the Square to the immense glee of the colored audience.<sup>48</sup>

<sup>46</sup> *Richmond Times*, Apr. 22, 1865; *New York World*, Apr. 8, 1865; Scott, pp. 180-81; Thomas T. Graves, "The Fall of Richmond: II. The Occupation," *Battles and Leaders of the Civil War*, IV, 726; Tucker, p. 159; S. A. Gerald, "Last Soldiers to Leave Richmond," *Confederate Veteran*, XVII (1910), 432; O. R., vol. XLVI, pt. I, pp. 1213, 1227-28. All the evidence on the advance of Stevens' detachment is not consistent. It is possible that Stevens was sent forward only after Weitzel had met Mayor Mayo, but the evidence is support of such a supposition is comparatively unsatisfactory (*ibid.*, pp. 1211, 1213; George F. Shepley, "Incidents of the Capture of Richmond," *Atlantic Monthly*, XLVI [1880], 23; Scott, p. 181; *New York Times*, Apr. 6, 1865).

<sup>47</sup> O. R., vol. XLVI, pt. I, pp. 1211, 1213, 1227-28; August V. Kautz, *Reminiscences of the Civil War* (typescript in Library of Congress), pp. 104-05.

<sup>48</sup> O. R., vol. XLVI, pt. I, pp. 1213, 1227; *Richmond Times*, Apr. 25, 1865; Graves, p. 726; Shepley, p. 24; Douglas S. Freeman, *A Calendar of Confederate Papers* (Richmond,

General Weitzel promptly proclaimed martial law and designated his chief of staff, General George F. Shepley, as military governor of the city. Devens' leading brigade, under Colonel Edward H. Ripley, was designated as provost guard and charged with restoring order and subduing the fire. The other troops were presently ordered into camp on the outskirts of the city, except for the white cavalry, which was ordered to assist in clearing the streets and in rounding up the many Confederate stragglers for incarceration in Libby Prison and Castle Thunder. Guards were posted over the public property throughout the city, and Major Stevens, as staff provost marshal, also furnished guards to many private residences in which women had been left without adequate male protection. Among the residences thus provided with guards was that of General Lee, in which Mrs. Lee then lay an invalid. On the whole the conduct of the Union officers and troops was exemplary and an honor to Northern arms.<sup>68</sup>

The main effort of Ripley's brigade was at once devoted to the task of checking the fire. It was found that no help could be obtained from the one-time fire department and but little from its inadequate or damaged equipment. Some engines were brought into play, the newly free colored men being drafted, to their perplexity, to work those which operated by hand. Principal reliance had to be placed, however, upon the demolition of buildings, executed with gunpowder by a detachment of engineers, and upon the use of buckets and wet blankets to prevent further buildings from catching fire. The struggle was arduous because of the headway gained by the flames and doubly dangerous because of the exploding munitions, and it was not until about 2 o'clock that the spread of the fire was halted. It continued to burn, however, throughout the following night, and the ruins smoldered for days.<sup>69</sup>

Before it was checked the fire had cut a wide swath from Mayo's Bridge to the west side of Capitol Square and gutted the area between the Tredegar Iron Works and the Basin.<sup>70</sup> Most of the business and industrial section of the city was thus consumed. Among the structures destroyed were the three bridges, the Petersburg and Danville railway depots, the principal tobacco

1908), p. 252; Leyburn, p. 95; J. B. Jones, II, 469; Adams, p. 255; Worthington C. Ford, ed., *A Cycle of Adams Letters, 1861-1865* (Boston, 1920), p. 261; *Charles Francis Adams, 1835-1915. An Autobiography* (Boston, 1916), p. 166.

<sup>68</sup> O. R., vol. XLVI, pt. I, pp. 1211, 1213, 1227-28; Shepley, p. 24; Graves, p. 727; Silas Adams, pp. 254-57; Edward H. Ripley, "The Burning of Richmond, Apr. 3, 1865," So Hist. Soc., Papers, XXXIV (1904), 73-74; Leyburn, p. 96; Miller, p. 305; De Leon, pp. 361-64; Mrs. Burton Harrison, *Recollections Grave and Gay* (New York, 1912), pp. 211-12; J. B. Jones, II, 470-71; New York World, Apr. 8, 1865; New York Times, Apr. 10, 1865; Richmond Whig, Apr. 10, 1865; Richmond Times, Apr. 26, 1865.

<sup>69</sup> O. R., vol. XLVI, pt. I, pp. 1165, 1227-28; Ripley, pp. 71-74; Graves, p. 727; Leyburn, p. 96; Watchall, p. 215; De Leon, pp. 362-63; New York Times, Apr. 6, 1865.

<sup>70</sup> Map of a Part of the City of Richmond Showing the Burnt Districts, Published by William Ira Smith, Proprietor Richmond Whig, April, 1865, photostat copy in Map Division, Library of Congress. Numerous photographs of the ruins at Richmond are contained in Francis T. Miller, ed., *The Photographic History of the Civil War* (10 vols., New York, 1911-12), IX, 306-07, and elsewhere *passim* (see index, X, 349).

warehouses, the flour and paper mills, several foundries, all the banks, many of the hotels, and most of the more prominent shops. Government establishments destroyed included the Armory, the Arsenal, the Laboratory, the commissary depot, the navy yards, and a majority of the government offices clustered around Capitol Square.<sup>51</sup>

Next morning, after the river had been cleared of mines, President Lincoln came up to the city by water from City Point. Accompanied by his son Tad, Admiral Porter, and a few marines, he proceeded on foot to Weitzel's headquarters, which had been established in the Confederate executive mansion. Upon landing he had been hailed by an old colored man as the Messiah, and along the way he was almost smothered by the colored population. At the house of President Davis he seems to have obtained much reflective satisfaction from sitting in Davis' own special chair. Afterward he drove about for a view of the city and then returned aboard the *Malvern*, Porter's flagship.<sup>52</sup>

Simultaneously, many Union dignitaries and camp followers began to flock into the city, impelled by duty, curiosity, or hope of gain.<sup>53</sup> The military authorities, for their part, now set to work recovering Confederate property, cleaning up the debris, and providing rations and work relief for the destitute population. On April 5, Judge J. A. Campbell, who had elected to remain behind in the city rather than accompany the Confederate government in his capacity as Assistant Secretary of War, had his well-known interview with Lincoln aboard the *Malvern* in which he sought the recall of the Virginia legislature to vote return to the Union. With that interview the occupation began to merge into the phase of reconstruction and this account may conveniently end.<sup>54</sup>

The fall of Richmond has been the subject of many reminiscences by persons unable to forget the scenes they witnessed during a terrible twenty-four hours, but sober historians, straining to follow the rush of environing military events and the later happenings crowded into this tragic month of April, 1865, have not turned aside to investigate and detail what took place within the city. What took place was undoubtedly less important than interesting, except as one may be concerned with the fate of Confederate archives containing the stuff of other history. As high melodrama, what took place mocks the historian's efforts at presentation and cries for the technique of the novelist or the motion pictures.

<sup>51</sup> Richmond *Whig*, Apr. 4, 1865; Philadelphia *Press*, Apr. 6 and 10, 1865; New York *World*, Apr. 8, 1865.

<sup>52</sup> D. D. Porter, *Incidents and Anecdotes of the Civil War* (New York, 1885), pp. 292-303; Charles C. Coffin, "Late Scenes in Richmond," *Atlantic Monthly*, XV (1865), 753-55; Richmond *Times*, Apr. 25 and 26, 1865; Silas Adams, p. 261; New York *Times*, Apr. 8, 1865; New York *World*, Apr. 8, 1865.

<sup>53</sup> Admiral Farragut paid a brief visit on Apr. 4. Mrs. Lincoln, Mrs. Grant, Senator Sumner, Assistant Secretary of War Dana, and others arrived on Apr. 5, and Vice-President Johnson put in his appearance on Apr. 6. Sutlers and traders swarmed up from their nest at City Point. (New York *Times*, Apr. 8 and 10, 1865).

<sup>54</sup> Richmond *Whig*, Apr. 10 and 12, 1865; Richmond *Times*, Apr. 25 and 26, 1865; New York *World*, Apr. 8, 1865; Silas Adams, p. 258; Shepley, p. 727.

## THE MEN THAT FOUGHT AT MINDEN

*By Major Charles Winslow Elliott, U. S. A., Retired*

**O**N THE sixth day of August, 1759, the Honorable William Pitt, Prime Minister of England, received a brief communication from Holland that gave him immense satisfaction. It was only a rumor, and the necessity for its verification was too important to permit it general circulation. Two days later, when a hard-riding courier arrived from Mr. Yorke, British Minister at The Hague, the news broke and London went wild with delight. That night houses were illuminated, every street had two bonfires, the pavements were jammed with people discussing the great news. Church bells pealed ceaselessly, and, according to Horace Walpole, "every squib in town got drunk and rioted about the streets till morning." At 5:00 in the morning came Captain Edward Ligonier, 7th Hussars, aide-de-camp to His Serene Highness Field Marshal the Duke of Brunswick, seven days from Minden on the Weser in Westphalia. In his dispatch case was a brief report to the gentlemen at the Horse Guards. On August 1, the allied English-Hanoverian army in Germany had administered a crushing defeat to the French invaders of the Electorate. And most of the glory, it appeared, belonged to the English infantry.

For England, the year 1759 was truly "The Year of Victory." On land and sea, in Europe, India and America, on the Channel, the Atlantic, the far Indian Ocean and in the Caribbean, the soldiers and sailors of Britain added lustre to her arms, laying the solid foundations of world empire. It was the fourth year of the tremendous struggle on the Continent between Frederick the Great and the mighty coalition of his implacable foes. The combined power of Austria, Russia, Sweden, Saxony and France pressed heavily upon the Prussian superman. On the North, East and South borders of his kingdom he faced the swarming armies like an old lion brought to bay. Their overwhelming numbers now threatened to submerge the remnants of his mercilessly decimated regiments.

In one respect, the previous year had been fortunate for Frederick. He was no longer dependent on his impoverished subjects for money, and to the weight of his formidable military strength was added that all-important factor of sea-power. England at last stood shoulder to shoulder with Prussia against the might of Louis XV. William Pitt, the Organizer of Victory, was again at the helm of the British state, with a Parliament at Westminster willing and ready to give him the fullest support. The Prime Minister was convinced that alliance with the King of Prussia, involving the employment of both English troops and English gold in his aid, was indispensable to a final triumph over France in Europe and America. Even if Canada and India were wrested by British soldiers and sailors from French control, the priceless conquests could not be

retained without corresponding successes in Germany. The full weight of England's naval and military power had been thrown into the scales in Prussia's favor. Twelve thousand red-coats and 700,000 pounds sterling—an annual subsidy—was Pitt's contribution towards the military salvation of the harried monarch at Berlin.

The defense of Hanover, King George's personal dominions on the Continent, as well as the whole of the Western front menaced by the French, was entrusted by Frederick and Pitt to the ablest general among that group of superb tacticians trained in war by the greatest soldier of the age. Ferdinand, Duke of Brunswick, was a brilliant commander at thirty-eight, a Field Marshal who was his master's aptest pupil. His temperament reflected the fiery genius of the King and the nephew possessed in large measure his uncle's astonishing ability to maintain himself in the field against heavy odds. The army which he commanded in Westphalia, and with which he won the victory of Crefeld in June, 1758, was a somewhat heterogeneous aggregation. Hanover supplied both cavalry and infantry, including the Electoral Guards regiments. These were supplemented by levies from Hesse and Brunswick, with a stiffening leaven of the matchless Prussian horse lent by Frederick. Their pay-rolls were all met by the British tax-payer. Pitt wisely concluded that the knowledge of whence came their thalers would encourage them to fight more cheerfully for what they might consider purely English purposes. Only the Duke himself remained a *de facto* Prussian officer, drawing his pay and allowance directly from Berlin.

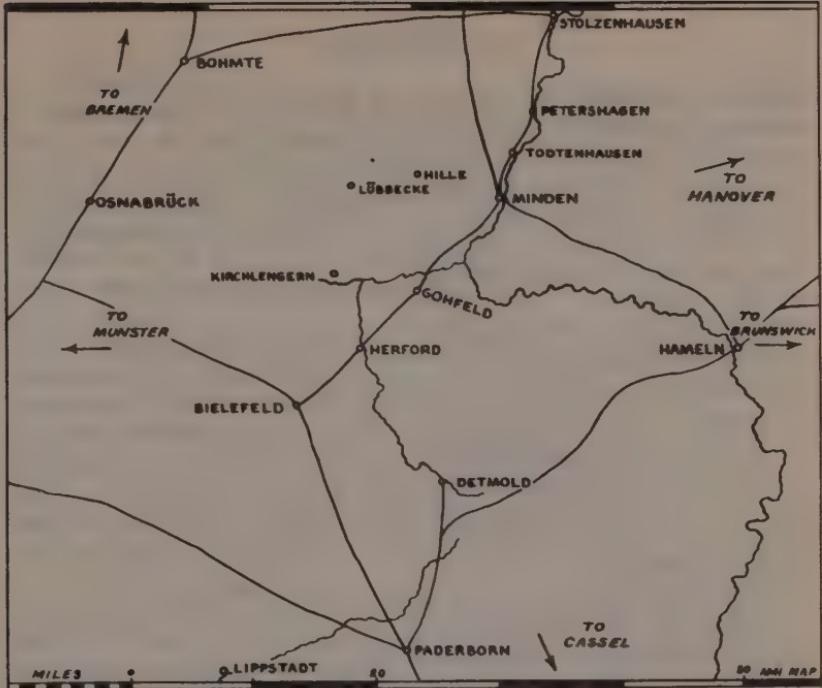
Reinforced by the English contingent, which joined him in August, 1758, Ferdinand was at the head of a force sufficiently formidable to warrant offensive operations. The six regiments of infantry, the two brigades of choice cavalry, and the several batteries of field artillery sent by Pitt to Germany, comprised the very flower of the British regular establishment. The enlisted men, toughened by long service and a rigid discipline, sublimely self-confident, contemptuous of the continental peasant conscripts, indifferent to death, wounds and campaign hardships, were practically unbeatable when competently led. Most of the senior officers had fought at Dettingen or Fontenoy in '43 and '45, as well as in Scotland against the forces of the Pretender. With a general like Ferdinand, they and their Hanoverian, Hessian and Prussian allies presented a *corps d'armée* well calculated to hold Frederick's right flank against the superior numbers of the French that faced them along the Rhine.

Early in the Spring of 1759 Brunswick took the offensive. In April, while temporarily separated from his British divisions, he attempted to surprise the Duc de Broglie at Bergen near Frankfurt. The Frenchman beat him off and he was obliged to fall back into Westphalia, followed closely by two strong enemy columns under de Broglie and the Marshal de Contades. Their combined 60,000 troops so outnumbered the 45,000 Allies that they were able to maneuver the Duke successively out of every position he endeavored to hold. By the seventh of July they had pushed him as far north as Osnabrück, although

his principal supply depots, at Munster, Lippstadt and Minden, were as yet unmolested. While Contades was concentrating at Herford, de Broglie executed a swift dash and on the tenth took Minden by surprise, capturing General Ludwig von Zastrow with 1500 men and an important magazine of forage and subsistence stores. A walled town, with stone bridges over the Weser, the capture of Minden opened the way to the overrunning of Hanover and Brunswick. Marauding bodies of light cavalry immediately began to terrorize the right bank of the river and the panic-stricken Regency at Hanover city packed up the archives before evacuating the electoral capital.

At Osnabrück Ferdinand was confronted with a problem requiring for its solution the full exercise of his military genius. Unless he hastened across the French front, eastward to the Weser, and drove back Contades and De Broglie, Hanover would be lost and his own army pinched between the river and the Dutch frontier. A wedge would thus be driven between him and his chief in Prussia. Frederick, busy with the Russians in the Oder Valley, was too far away and too closely engaged to be of any help to the Westphalian army. The Duke could ill afford the loss of his immense forage stores at Osnabrück. His magazines at Munster lay still further West and must keep open communication with the lower Weser and the Elbe to insure the safe withdrawal to their transports of the English contingents in case of disaster. He saw that he must fight Contades soon and because of the Frenchman's superiority of numbers the encounter must take place on ground and under circumstances favorable to the numerically weaker contestant. On the tenth he suddenly abandoned Osnabrück at night and marched swiftly in a northeasterly direction to Bohmte, 2½ kilometers. Here he learned of the fall of Minden on the previous day. His other magazines on the Weser, at Nienburg and Stolzenau were now imperilled. He had to decide whether to continue on to the river and save these stores, or return and protect Osnabrück and Munster. Having consulted Lord Sackville, the commander of the British troops, the Duke rejected the advice given—to abandon the Weser—and sent a strong detachment on to Stolzenau, 28 kilometers north of Minden.<sup>1</sup> With the rest of the army he followed on the twelfth. In order to keep clear his communications with England he dispatched Major-General Karl Heinrich von Dreves to seize the neutral Free City of Bremen, an enterprise cleverly and expeditiously concluded on the night of the 13th-14th July. Von Dreves garrisoned the outraged but helpless mercantile metropolis and hurried back to find that Osnabrück had been occupied by the enemy as soon as Brunswick departed. It took him only a day or so to drive them out and regain the depot.

<sup>1</sup> Ferdinand to Sackville, Bohmte, July 11, 1759, *Hist. MSS. Comm.*, IX, Part 3, p. 79 (Stopford-Sackville Papers). Sackville advised him to let the Weser magazines go and save Munster unless the latter place had already fallen, in which case the magazines at Nienburg should be protected and a battle and victory hoped for. The French did not take Munster until the 23rd.



On the fourteenth of July Contades moved his "Grand Armée" from Herford<sup>2</sup> to the immediate neighborhood of Minden. He had detached the Duc de Brissac with a division each of infantry and cavalry to Göhfeld, near the bend of the Weser about 16 kilometers above the city. Practically all the subsistence for the French invaders came north from Cassel, via Paderborn, and de Brissac's assignment was to cover this route and guard Contades' left flank. On the fifteenth the Marshal was encamped just above Minden, on the west side of the river, his front covered by the Bastau Creek, his right resting on the Weser and his left on and behind the vast Minden marshes through which the rivulet flowed. The camp of de Broglie was across the river, between Bückeburg and the city. The whole French position, linked by a sufficiency of bridges and pivoted on the walled town in the center, was a powerful one, impossible for Ferdinand either to turn or attack frontally with any hope of success. Yet it either had to be attacked or Contades enticed out of it into a battle on open ground. The Duke began at once the preparation of a bait which would lure the Marquis from his lair and to grips on the hillocky heath north of the marshes.

On the night of the fourteenth and fifteenth Ferdinand moved southward from Stolzenau to Petershausen, a village on the river 11½ kilometers north of Minden. His left rested now on the Weser; his right extended westward to the

<sup>2</sup> Usually referred to in the old accounts of the campaign as Hervorden. I have used the modern nomenclature as given on present day German maps. The spelling of many of the town names in the contemporary and later narratives varies widely, but in each case I have checked the locality and adopted the modern German orthography.

village of Bruniköstige. Two days later he advanced the Hereditary Prince of Brunswick, his nephew, to the village of Todtenhausen, within sight of Contades' farthest outposts. Here strong redoubts were constructed by the engineers. Colonel Nikolaus Luckner, with a brigade of jägers, two battalions of grenadiers, and a body of Hanoverian hussars, crossed the river to watch de Broglie and clear the east bank of French raiding parties. For a week the two armies sat quietly watching each other, with little action except clashes between reconnoitering patrols.

On the twenty-second Ferdinand sent 10,000 men into the works at Todtenhausen, under the command of Major General Georg August von Wangenheim, a Brunswicker in the Prussian service. The remainder of the army was drawn off gradually to the West and Southwest, detachments in observation occupying the villages of Kuttenhausen, Holzhausen and Friedewald. A wide gap was purposely left open between Wangenheim's right and the Duke's left. As the Allies thus drew nearer to the city the French division under the Comte de Rougraves, which supplied Contades' outpost line, withdrew to the shelter of the Minden ramparts.

The Marquis de Contades had meanwhile been consolidating his general position. A division under the Comte de St. Germain had been posted at Bielefeld. A brigade was sent to Hameln, on the Weser above Minden, to contain the small garrison left there by Ferdinand and observe the route from Paderborn down which came the long trains of ration waggons. The important village of Lubbecke, 23 kilometers west of the city and beyond the western extremity of the marshes, was occupied by Berchini's hussars. Hille, across the Bastau, was lightly held by some volunteer troops, and Eickhorst, at the southern end of the dike which spanned the marsh at Hille, by General Andlau with a small force and two guns. Andlau was in touch with de Brissac at Gohfeld. Together they covered the main route from Herford to Minden. Far behind, and to the South and West, the Duc de Chevreuse blockaded Lippstadt, while the Duc d'Armentières lay siege to Munster, taking it and its rich magazines on July 23.

The fall of Munster made it imperative that Ferdinand force the fighting at once, lest d'Armentières move northward and threaten the right flank of the Allies. Fortunately for Ferdinand, the Frenchman neglected the opportunity. Leaving a garrison in the town he went off to relieve Chevreuse at Lippstadt so that the latter could return to army headquarters at Minden. Brunswick decided upon a bold and unorthodox procedure. In the camps of his great uncle he had learned to estimate with remarkable accuracy the military capacity—and incapacity—of the too often inept generals who served Maria Theresa and Madame de Pompadour. He knew that his present opponent was neither a Condé nor a Turenne. Pitted against Contades, he could afford to take chances that would be fatal to any general who risked them in front of Frederick of Prussia.

Having already separated himself from Wangenheim, Brunswick now detached another strong force under his nephew the Hereditary Prince, to clear the

French from Lubbecke and menace Contades' left as well as his communications with Cassel. The allied army was thus split into three widely separated bodies and exposed to the danger of being beaten in detail by the numerically superior and well concentrated French. But Ferdinand's maneuvers and the wisdom of his dispositions have been warmly praised by Jomini. Certainly the ultimate result seems to have justified them.

The Hereditary Prince acted with energy and speed. He chased Berchini's hussars from Lubbecke and the Hainaut volunteers from Hille, circled the morass and posted himself at Rimsel facing Herford. There he was joined by the agile Von Dreves, who had returned from Bremen and retaken Osnabrück, discovering, with pardonable elation, that the magazines there had been considerably augmented by the French during their brief tenure of the place. Together the Prince and Von Dreves began to close in on de Brissac's position at Göhfeld.

Louis-George-Erasme, Marquis de Contades, Field Marshal of France, was no great general but he was a veteran of many campaigns and he knew the established principles of eighteenth century warfare well enough. He saw his enemy committing, apparently, every error denounced by the book. Ferdinand in the face of a numerically superior army, had split his own into three widely separated parts. Between himself and the Hereditary Prince more than thirty kilometers lay open. To Contades, it was vitally important that the Prince and Von Dreves be not permitted to get squarely athwart the French communications with Paderborn. It seemed certain that de Brissac would be able to prevent this. The obvious procedure therefore, was for Contades to drive between the Duke and Wangenheim, turn the former's left and roll it up on the marsh. De Broglie could be loosed against Wangenheim to either crush him or hold him fast while the French center poured into the gap so invitingly left open. Inasmuch as the wary Allied commander would not attack his impregnable position, it seemed to the Marshal that the opportunity of ending the campaign with a single battle was being offered him gratuitously. The only apparent peril lay in the possibility that Wangenheim, strongly entrenched behind redoubts, might beat off de Broglie and even spare enough troops to strike at the French flank when it deployed on the plain.

Contades determined to attack. On the thirty-first of July he issued his battle order. It set forth in minutest detail the apportioning of the brigade and regimental assignments in the operation to ensue. De Brissac at Göhfeld was directed to contain the Hereditary Prince; de Broglie to cross the Weser by the city bridges and debouch on the heath from the northern gates, advancing boldly in the direction of Todtenhausen and falling on Wangenheim with speed and resolution. His assault, he was instructed, must be "sudden and vigorous, in order to overthrow his troops, cut off his retreat, and spread dismay and confusion." To insure complete success, he was reinforced by the Royal Grenadiers, the Grenadiers of France, six additional field guns, and four howitzers. Over and over De

Broglie was reminded that a general defeat of the Allies could only be predicated on his own success at Todtenhausen.

The French engineers had constructed nineteen bridges over the creek and the marshy ground along its banks. The army was directed to cross these in eight columns, each guided by an Assistant Quartermaster. All baggage was sent up the river to Rehman. Instead of the *generale*, the signal for moving, soon after sun-down on the thirty-first, would be the beating of the *retraite* by the drums at headquarters. Before daylight all troops must be on the plain and deployed for battle. The corps of de Broglie, resting its right on the river, would march directly north towards Todtenhausen, maintaining touch with Contades' right as the Marshal's force fanned out in a great arc with its left on the marsh, the arc gradually straightening and lengthening as its right drove in between Wangenheim and Ferdinand's left at Friedewalde. The Duc de Havre was instructed to make, with a small force, a feint from the post at Eichorst against Hille across the morass, but not to cross the dike unless that village was first taken by the French in their general advance. He would also watch Lübecke closely and be prepared to cover the retreat of the army to Herford in case of unforeseen disaster. The ramparts of the city, garnished thickly with heavy guns, would be manned by the Lowendahl brigade (Maj. Gen. Bisson) to cover de Broglie's advance and hold the stone bridges.

At dusk the French army began to move. By midnight several of the columns were over the creek and deploying slowly on the heath. The operation, in inky darkness, a high wind and occasional gusts of rain, was complicated and difficult, a severe test for troops far better trained and disciplined than were most of the Marshal's regiments. There was, despite the meticulously worded orders, considerable confusion; several of the columns failed to find their proper places in the darkness and got badly entangled with each other while trying to deploy into line. The Duc de Broglie, crossing by the city bridges and marching through lighted streets, was outside the walls and in position to advance long before Contades' milling columns were arranged in any semblance of the order prescribed for them. He began his cannonade at Todtenhausen at 5:00 A. M., but it was 8:00 o'clock before the main army was in line on the plain.

Contades had received from de Rougraves a detailed description of the topography beyond the marsh. The ground was rough in places, the heath dotted with tiny villages, gridironed with enclosed cornfields, and here and there were small woods. It would seem to have been ill-suited for cavalry tactics in mass. But for some reason, never satisfactorily explained, the Marshal ordered that the usual and orthodox arrangement in line of battle—infantry in the center and cavalry on the wings—be reversed. His mounted troops, of which he had 60 squadrons, supposedly the most redoubtable units of the French army, he posted in the center, with artillery in front and on both flanks. The foot troops took positions on the right and left of the horse, supported likewise by batteries of light and heavy guns. The splendid brigades of cavalry were

to move in two lines, with a third—mounted *gendarmerie* and *carabiniers*—following in reserve. On the extreme left, resting their flank on the marsh, four regiments of infantry, the Condé, the Aquitaine, the du Roi, and the Champagne, under Lieutenant General Guerchy, and supported in a second line by a brigade of Saxon infantry under the Marquis de Lusatia, were to face Hahnen, their lines extending diagonally across the heath in the direction of the river. The right, of infantry also, was formed in two lines under Lieutenant General Beaupreau, the Regiments Rouergue, Belsunce; Toussaint and Picardy forming the front line and those of Auvergne and Anhalt under the Comte de St. Germaine, the second.

The cavalry in the center was drawn up in three lines. In front rode the Regiments Cravates, Mestre de Camp and Colonel-Général, commanded by the Duc de Fitzjames, a son of the great Berwick and a grandson (bar sinister), of King James II of England. In a second line rode the Regiments Étranger, Bourgogne and du Roi, led by Lieutenant-General Dumesnil. The light horse, *gendarmerie* and *carabiniers* brought up the rear under Lieutenant General Poyenne.

When day dawned, overcast, misty and damp, with a furious gale blowing from the Southwest, Ferdinand had completed his plans for meeting them. He had been expecting a French advance for two days and he had twice cautioned his general officers that they must familiarize themselves with the features of the ground in front where the battle probably would occur. Always polite, he had given his directions to the assembled senior commanders in the most courteous fashion.

"How extraordinarily civil the Prince is today!" one of the English officers had remarked as they left the conference. A veteran who had served long in Germany smiled grimly.

"Yes, my friend. I observed that also, and be damned to him! You will find that he's always devilishly polite just when we are about to be devilishly peppered!"

Brunswick's general headquarters were at Hille, on the far right of his line and near the fringe of the marsh. The Allied front extended beyond the village of Friedewald, a distance of seven kilometers. Between Friedewald and Todtenhausen lay five kilometers of farmlands covered only by patrols. The pickets along the front were pushed forward to Hartum, Nordemmers and Holzhausen. On the evening of July 31 the Prince of Anhalt was General Officer of the Day. There was no moon and despite the gusty wind a heavy mist obscured the vision of the sentries on outguard.

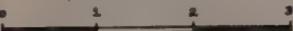
At 10:00 P. M. two French deserters were brought to Anhalt near Hartum. From them he learned that the entire French army was on the move and crossing the Bastau. His Serene Highness was not, apparently, much impressed with the significance of this startling disclosure. At 3:00 A. M., however, it occurred to him that the fact might be of interest to the commander-in-chief and he trans-

mitted his information to the Duke. Brunswick, who had previously given orders that all troops should be in battle positions by 1:00 A. M., instantly scattered a swarm of aides among the division commanders, with directions to stand to arms and deploy for action. Such was the excellence of discipline and training of the army that long before daylight eight columns were ready and some of the leading brigades deployed at carefully calculated intervals. On the right, from the edge of the marsh near Hartum and extending to the borders of a wood, were twenty-four squadrons of cavalry, nine of them German and fifteen British. The latter included the Royal Horse Guards (The Blues), the Scots Greys, the 1st (Bland's) and the 3d Dragoon Guards, and the 10th Dragoons. The two German regiments were Hanoverian Guards cavalry and were posted on the left and slightly behind the English. In immediate command of this division was Lieutenant General Lord George Sackville, senior in rank to all general officers of the army except the Duke himself. He had come over to Germany in 1758 as second-in-command of the British contingent under the Duke of Marlborough and on the death of that officer had succeeded to the command in chief. During the operations around Minden he seems, for some reason, to have confined his attentions exclusively to the cavalry, leaving the direction of the British infantry division to its two brigadiers and the commander-in-chief himself.

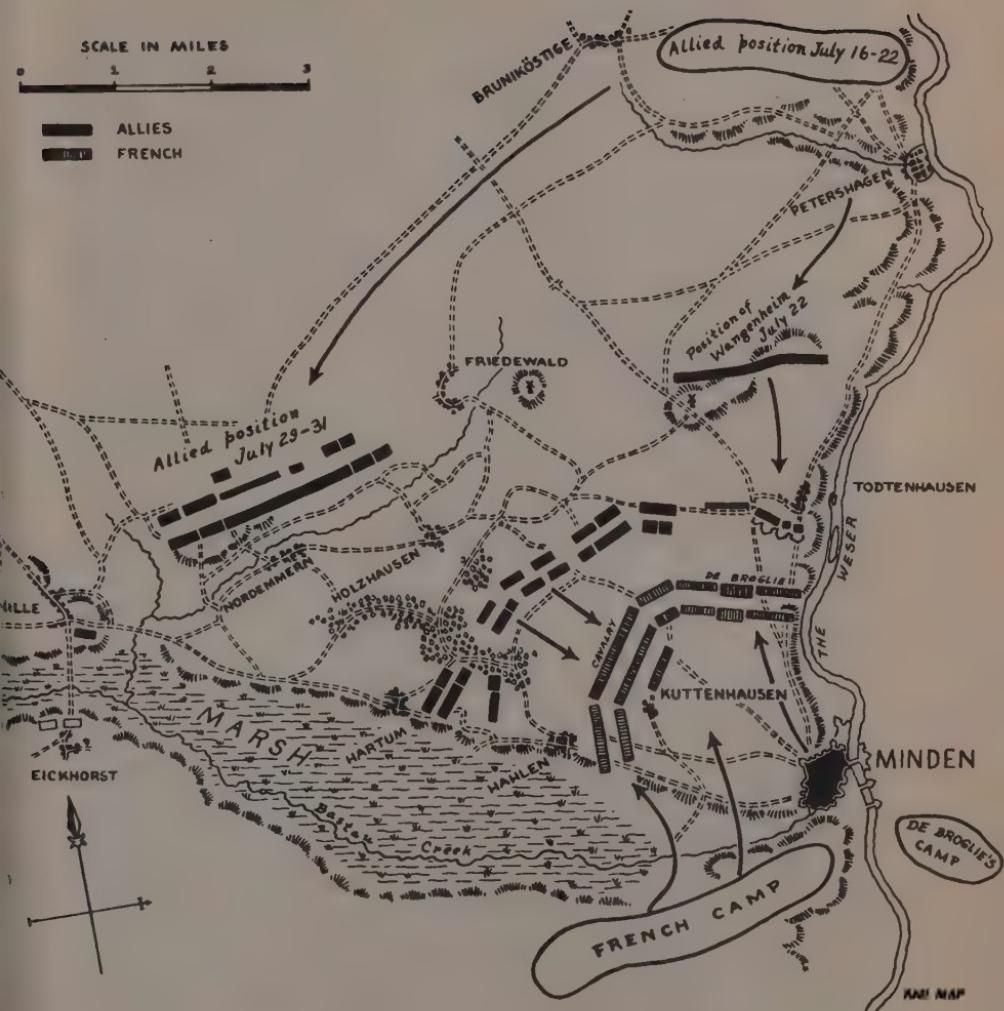
In the military and political world of the day, Lord George was a personage of considerable note and importance. Tall, robust and active, he was "haughty of official discourse and of an exacting temper" but usually agreeable in private. He had entered the army in 1737 as a captain of the 7th Dragoon Guards and as a lieutenant colonel had been wounded at Fontenoy. In 1749, when thirty-three years old, he was already a full colonel, three years later a major general and in 1757 was appointed Lieutenant General of the Ordnance, retaining the colonelcy of the 2d Dragoon Guards. During his service in Germany, his insular contempt for all "foreigners," his evident jealousy of the brilliant Brunswick, and his natural obstinacy, pertinacity and hauteur made him a difficult subordinate for the army commander to handle. In official contacts with the Duke throughout the campaign he had displayed an arrogance that quickly destroyed the possibility of cordial relations between them. Irascible old George II disliked Sackville intensely but with the Prince of Wales and the so-called "Little Court" at Leicester House he enjoyed popularity and influence. When he demanded a high command on the Continent, the Prime Minister, although he distrusted him, permitted the appointment rather than antagonize the powerful political clique headed by the Prince.<sup>3</sup> It is difficult to avoid the conclusion that by the mid-summer of 1759 Lord George was convinced that he was safe in adopting towards the Duke of Brunswick an attitude of semi-independence and covert opposition.

<sup>3</sup> Von Ruville, *William Pitt*, II, 243-244. Basil Williams asserts that Pitt and Sackville were on the best of terms and that the former held the military talents of Lord George in high estimation. My own study of their relations leads me to doubt Pitt's sincerity in thus expressing himself.

SCALE IN MILES



■ ALLIES  
■ FRENCH



#### PLAN OF THE BATTLE OF MINDEN

Based on maps reproduced in Tempelhof, Geschichte des Siebenjährigen Krieges and in the official report of the Sackville trial, compared with modern surveys.

In common with the other Allied generals, Sackville had been ordered to have his troops on the alert at 1:00 A. M. At that hour, although the cavalry division was in the saddle, its commander was still asleep in his billet. At 3:00 o'clock, when the army started to move at the Duke's command, the Right Wing was still waiting for Lord George to appear. Second in command of the troops under Sackville, was the Marquis of Granby, whom a contemporary calls "a splendid soldier, brave to a fault, generous to profusion, careful of his soldiers and beloved by them." He had been a lieutenant general since the previous February, retaining his personal command as colonel of the Royal Horse Guards (The Blues). Granby was then more or less "on official terms" with Lord George but was admired and trusted by Ferdinand. The two English cavalry brigades were commanded by Major General John Mostyn and Brigadier General George A. Elliot.<sup>4</sup> The Hanoverian brigade was led by Major General Johann Schele.

The Duke's second column, on the left of the cavalry, comprised the British-Hanoverian artillery corps under Colonel Browne and two German officers, Lt. Col. Hutte, and Major Hasse. The three English batteries (medium 12-pounders), were commanded by Captains Drummond, Foy and Macbean, with Captain William Phillips<sup>5</sup> acting as brigadier. In the center of the Allied line marched the doughty division of British infantry, two brigades led by Major Generals John Waldegrave and William Kingsley. Waldegrave, with the 12th (Suffolks), 23rd (Welsh Fusiliers) and 37th Foot (Hampshires), was in the first line. Kingsley's 20th (Lancashire Fusiliers), his own regiment, the 25th (King's Own Scottish Borderers) and the 51st (King's Own Yorkshire Light Infantry) followed as a second line. Two regiments of Hanoverian Guards infantry (Hardenburg's and Hammerstein's) covered the division's left flank. Lord George Sackville, officially in command of all British troops on the field, seems to have left the foot entirely to their own devices. A competent Hanoverian general, Baron August Friedrich von Spörcken, was apparently present with the German guards regiments and possibly was assumed to be in command of the infantry of the right wing. There is slight evidence, however, that he attempted to exercise this command, or that either of the English brigadiers looked to him for direction.<sup>6</sup> On Von Spörcken's left a column of Hanoverian infantry under Lieutenant General Phillip von Imhoff extended to the village of Friedewald, and beyond Imhoff the extreme left of the army was covered by a body of Hessian, Prussian and Holstein cavalry under the Duke of Holstein and Lieut. General Ludwig von und zu Urff, the latter a Hessian officer of considerable ability and reputation.<sup>7</sup> Beyond Urff lay the open stretch of country towards Wangenheim's

<sup>4</sup> Afterwards the famous defender of Gibraltar and created Lord Heathfield.

<sup>5</sup> A major general in 1777, he was taken prisoner with Burgoyne at Saratoga.

<sup>6</sup> Leadam Polit. Hist. of England, IX, 461, and von Ruville, *op. cit.* both assume that Von Spörcken commanded the division. Brunswick, on the field, sent orders directly to Waldegrave and the German evidently merely conformed to the former's movements.

<sup>7</sup> Deutsche Allgemeine Biographie, XXXIX, 352, "Urff." Names, initials, ranks, and spelling of names of the German officers conform to those given in their biographical sketches in this work.

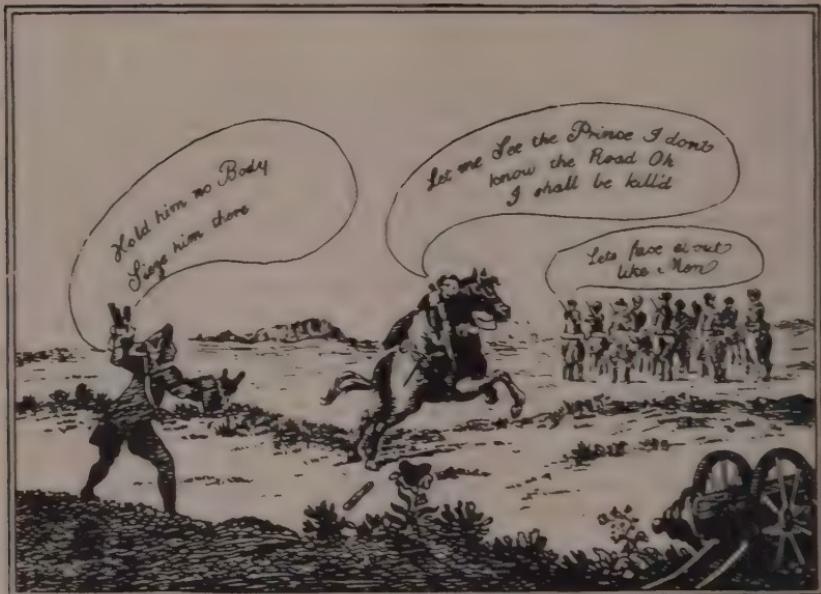
right at Todtenhausen, the bait so enticingly dangled before the eyes of the Maréchal de Contades.

When Ferdinand learned at 3:00 o'clock that the French were across the Bastau, he was justly exasperated. The dilatory Prince of Anhalt had allowed Contades to gain nearly three hours time and the Allied line was not yet completely ready for action. It had been the Duke's intention to rest his right, when the battle commenced, on the village of Hahlen, and the moment that he received Anhalt's belated message, he rode at once from his headquarters at Hille to Hartum. Finding the Prince there, he directed him to collect the pickets and seize the stone-walled houses and gardens at Hahlen. The French were already in possession and Guerchy's advance guards were working slowly forward along the edge of the marsh. With a single aide, Ferdinand galloped towards the center of the line where he found Waldegrave, Kingsley and Von Spörcken in position, the first line of the English ready to deploy. Through the mists that swirled across the heath, in the first faint light of approaching day, the dark masses of the French could be discerned nearing the village of Küttenhausen. The western gale, sweeping towards the Weser, prevented the sound of de Broglie's guns from reaching him, but the orange flashes told the Duke that the Frenchman was already hammering at the redoubts behind which Wangenheim was posted.

Back at Hille the gun duel between the Duc de Havre and the headquarters guard had also begun, but Brunswick was satisfied that the batteries and infantry he had left there would be able to hold the causeway. Certain now that all his eight columns were ready and advancing except the English cavalry, he returned to the vicinity of Hahlen. Without much difficulty, Anhalt drove out Guerchy's light troops, but the moment the Duke's back was turned the easily satisfied General Officer of the Day settled down and allowed the French to reform unmolested. Beyond the wood, the English infantry remained in column, Waldegrave postponing his deployment until he was certain that Hahlen was safely in Allied hands. As soon as he saw Anhalt securely established in the village and the right of the army thus safely anchored, he formed his brigade in line and waited for orders to move forward. Ferdinand then detached Captain Foy's battery and ordered it to cross the front and assume a position near Hahlen, supported by a regiment of Saxe-Gotha infantry. Foy emplaced his guns close by an isolated windmill on the plain a little distance north of the hamlet. One of Wangenheim's aides reported to the Duke that all was safe at Todtenhausen; de Broglie was confining his activities to a more or less harmless bombardment of the redoubts. The French infantry, however, were believed to be working forward into the gap and threatening to enfilade the Allied left.

The deployment of Contades' tremendous cavalry force had been accomplished in the dark, but with considerable confusion and crowding. Before full daylight came, however, the brigades were arrayed in fairly good order. The entire French army was then drawn up in a convex double line extending from the

Who shewd his Rear at Minden 1759.



Lord Townshend wrote,

New & Scandry sc. 352 Strand

Contemporary cartoon of Lord Sackville's action at Minden by Lord George Townshend.  
Courtesy of the Frick Art Reference Library.

marsh just below Hahlen, through Kuttenhausen to the ground on de Broglie's left. The Duke of Brunswick, believing that his own most promising field of action lay on his own right, sent Macbean's battery and Hasse's German brigade of heavy artillery to join Foy, shortly after Anhalt carried Hahlen. As they crossed the front of the infantry, Waldegrave was just beginning his development. It was then that the Duke sent an officer to convey to the English brigadier the famous verbal order which was destined, because of a misinterpretation, to alter all the allied commander's plans and yet insure him the victory.

To a German aide-de-camp, who evidently entertained no doubts of his own fluency in the English language, the commander-in-chief may be presumed to have said:

"*Herr So-und-so, Reiten Sie an die Englischen,—sagen Sie der Vowitz soll mit schlagenden Trommeln sein!*"

Reining up in front of the English general at the head of the infantry the aide delivered his ambiguous translation of the command:

"General Waldegrave, His Highness directs that you will advance with drums beating!"

To the literal-minded commander of the first line, this could mean only one

"Mr Ducrot, ride to the English and tell them that their advance is to be with drums beating!"

thing. He was entirely content to accept the order precisely as transmitted to him. He turned in his saddle to the eagerly waiting Suffolks, Hampshires and Welsh, gave the command "Forward!" and at the same time directed the drummers to beat the roll. The red-coated line swung forward at parade step, dressed perfectly on the center. Fifteen hundred yards to their front they could see the massed French cavalry and straight for those sixty squadrons they started. Behind, Kingsley's brigade took its cue from the regiments ahead. The 20th, 51st and 25th stepped out, beginning their own deployment while actually moving forward in column. General Von Spörcken and his two Hanoverian Guards regiments, having received no orders to advance, hesitated briefly and then followed. Over on the extreme left Imhoff and his division stared incredulously at this inexplicable breaking of the line.

Across the heath, where the French generals were still struggling to secure the drill-book intervals and distances among their brigades, the long lines of Contades' cavalry also stared. What *folie de guerre* was this? Infantry advancing *in line*, and only a few regiments at that, against an overwhelming force of the finest horse that France could boast? And that horse flanked by more than two hundred guns and two divisions of infantry! These English must be mad. There was only one thing to do—ride them down before they could form those terrible squares that could not be broken at Fontenoy. Along the French front the bugles screamed as trumpeter after trumpeter sounded the charge. The massed batteries on the flanks gave tongue and a storm of solid shot began to rip out lanes in Waldegrave's ranks. But the redcoats never lost the cadence marked by the steady thudding of their drums. The gaps closed, the sergeants called the dress, and the line came on. Then the cavalry gathered up reins, drew long swords and put spurs to the plunging chargers' flanks. At a trot first and then a headlong gallop the regiments flowed over the plain like an avalanche unloosed. Cravates, Mestre de Camp and Colonel-General, steel cuirassed and with helmet plumes tossing in the wind, thundered down on the English. Here was opportunity for the dragoons of the Most Christian King to avenge the bloody repulse they had suffered under their monarch's eyes at Fontenoy.

As the serried ranks of the French came on, Waldegrave halted his line. Up came the flintlocks. Not until the mad-eyed chargers were within ten yards was the command given to fire. A crashing volley and every two-ounce ball found a target impossible to miss. Down went the entire front rank, horses and men, in a screaming welter of destruction. The second line, plowing through the wreckage, came on with splendid courage. Imperturbably the redcoats reloaded and repeated volleys tumbled from the saddles most of the horsemen within range. The survivors turned their mounts and rode desperately to the rear. The second brigade, coming on at the charge, Regiments Royal Étranger, Bourgogne and du Roi, Lieutenant-General Dumesnil at their head, swept through the remnants of the Duke of Fitzjames' broken ranks.

Again the English reloaded and waited. Waldegrave, confident that he could beat off any number, disdained to form squares. Behind him, Kingsley was now

in line, ready to hold the front should the first brigade be broken. There was little need for concern. More of those murderous volleys brought to earth Dumesnil's dragoons exactly as they had mowed down those of Milord Fitzjames. The French artillery no longer fired, masked by their own cavalry, but on the right Beaupreau with his infantry division was moving up to strike the isolated English on the flank. Over near the brink of the marsh the Court of Lusatia and the Saxons hurried forward to support Guechy, who was still held by Anhalt, pinned fast in front of Hahlen. So long as the Prince's pickets hung onto the village, and the Allied batteries near the windmill were untaken, neither Guechy nor the Saxons could swing in on the exposed right flank of the English infantry. At Hartum, nearly two kilometers to the West, the British cavalry still stood motionless. Ferdinand, watching with deep satisfaction the ruin of the first two French charges, had already sent off an aide to Sackville with orders to bring forward the right wing and sustain the far advanced center.

Twice hurled back, the French cavalry was not yet ready to quit. Their reserve, the mounted *gendarmerie* and *carabiniers* under Poyenne, excellent light horse, were galloped forward through the shattered dragoons. They fell on the now depleted English line with magnificent *élan*. Almost they succeeded where the heavy squadrons had failed. Some of the troopers broke through Waldegrave's ranks and were sabring the Suffolks and Hampshires who gathered in small groups and lunged at them with the bayonet. With the aid of Kingsley and Von Spörcken, however, they were beaten off, the brigade reformed and still Waldegrave would not pay the French the compliment of forming squares. The Marquis de Contades, wrathfully watching from behind his center, turned to his staff and exclaimed :

"Messieurs, I have seen something that I never expected to see! Infantry in line, unbroken by three attacks of sixty squadrons of the King's horse, and without forming squares! *C'est incroyable!*"

Kingsley and Von Spörcken were now fully engaged. Wheeling to the left they sent reeling back Beaupreau's foot regiments that strove to encircle Waldegrave. There was some bitter fighting among the rose gardens with which the Westphalian peasants had surrounded their cottages. Between volleys, the 20th, remembering perhaps the red roses that their Lancastrian forebears had worn at Bosworth Field three hundred years before, plucked the crimson blossoms and stuck them in their hats. To this day the regiment commemorates the struggle by wearing the Roses of Minden on the first day of August.

The Duke of Brunswick, seeing victory wavering in the balance, sent off a second, a third and a fourth aide-de-camp to Lord George Sackville, with reiterated orders that he fall on the broken French center before it can reform. But the English horse, hidden from view by the wood, still failed to put in an appearance.

"Is there no way to get that *verdammter Englischer* forward?" It was now close to 10:00 o'clock. The hot August sun had at last broken through the leaden skies and was glittering on bayonets, sabres and polished helmets across the

wide sweep of the cornfields and fruit gardens. A vast pall of mingled smoke and dust had replaced the morning mists. De Broglie continued his listless cannonade of Wangenheim's entrenchments but made no effort to storm those dangerous looking redoubts. He was, he insisted, waiting for the French center to break the Allied line. On Ferdinand's left, Urff and his Hessians had checked such of Beaupreau's regiments as survived their encounter with Kingsley, Von Spörcken and Imhoff's Hanoverian Guards. The Duke of Holstein, with his own and some squadrons of Prussian horse, made a brilliant charge to crush Contades' right. There St. Germaine with the Auvergne and Anhalt regiments was trying vainly to cover the confusion of the disordered cavalry. A regiment of French marines, battling to open a way to withdrawal, fired on the Prussians, who wheeled instantly, rode through and cut them to pieces, capturing two flags and ten guns. The Marshal decided that the day was lost and the French drums beat the *retraite*. This time there was no deception intended. *Retraite* meant retreat, and the signal was obeyed with all speed. The whole army turned its face towards Minden and flowed in a torrent of disorder in the direction of the city gates.

The English infantry, the Hanoverians and the Hessian cavalry pursued until they came within range of the big 24-pounders on the walls. But without the aide of the heavy British cavalry Ferdinand was not able to convert the withdrawal into a complete rout. Before noon the French were under the cavaliers of Minden and streaming into the city, defeated but by no means annihilated. De Broglie's corps fell back in good order and the unbroken Saxon infantry along the morass covered the retirement of the left, fiercely harassed by Foy and Macbean with their light guns.

The failure of Lord George Sackville's mounted division to share in the glory of the victory still constitutes one of the puzzling enigmas of military history. From a careful check of the contemporary accounts, the official reports of the senior officers and the verbal testimony of the *dramatis personae* later placed on record, a reasonably accurate sequence of the facts can be established. The personal motives which impelled Lord George to act as he did remain a subject for hypothetical conjecture. The first of the Duke's aides who carried to the commander of the right wing cavalry the order to move, was a certain Captain Wintzingrod, a Hessian infantry officer serving on the headquarters staff. While the English foot was advancing towards the French center, Brunswick sent him to Sackville with a command to "advance with the cavalry of the right wing and sustain the infantry which is about to engage." The Hessian rode at once, through the wood towards Hartum, in search of Lord George. As he neared the northern edge of the wood—he had started evidently, from a position on the plain beyond Von Spörcken's troops and near those of Imhoff—he was passed by the Duke of Richmond, who called out to him that Sackville should form the cavalry "on the heath, in a third line, *behind the infantry*." Wintzingrod found the English general with his brigades where they had originally been posted, that is, between the wood and the marsh, near the village of Hartum and some dis-

tance behind Foy's battery at the windmill. They were far enough in rear of the eastern edge of the wood so that they were unable to see the movements of Waldegrave and Kingsley. Sackville, with his staff, was at the head of the first brigade with its commander, General Mostyn. Wintzingrod, passing through the wood, came out between the first and second line where he found the Marquis of Granby who directed him to the position of the division commander. The Hessian told Lord Granby then, that he bore orders for the British cavalry to advance, and added that their movement would have to be to the left and through the woods to the heath. When he repeated this to Sackville the latter was inclined to doubt the correctness of the transmitted order. How was he to advance, he inquired. Directly in front of him, where the ground was open, lay the regiment of Saxe-Gotha infantry supporting Phillips and Foy's batteries. If he tried to pass through the woods the line of battle would be broken. Did the Duke intend to break that line? The aide explained again, speaking in French, and left Lord George under the impression that the order was about to be executed. On his return to the Duke, he met Colonel Charles Fitzroy, another of the staff aides, in full gallop towards the cavalry wing. A few minutes before, Brunswick had observed the initial failure of the French to break Waldegrave's line and had turned to his staff and exclaimed :

*"Voici le bon moment pour la cavallerie!"*

Fitzroy had volunteered to follow Wintzingrod and hasten the desired advance.

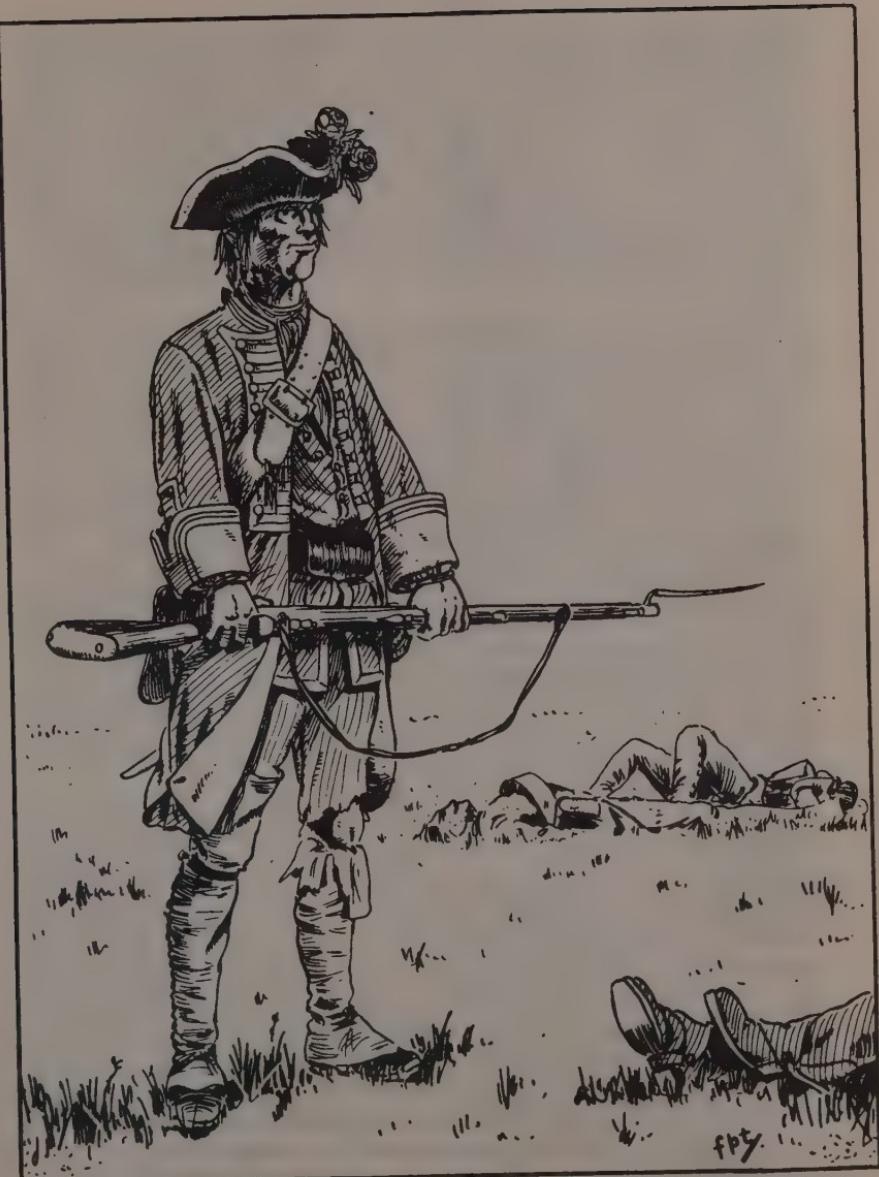
*"Courrez-y!"* ordered the Duke vehemently.

Meeting the Hessian on the north side of the wood, Fitzroy yelled at him in French :

"Why are not the cavalry advancing? The Duke is very impatient!" Together they dashed through the trees and underbrush and while Fitzroy rode up breathlessly to Sackville, the German sought out Lord Granby. Forgetting that he had no business to communicate orders directly to a subordinate, he urged the Marquis to begin at once the movement of his troops. Granby, like the other officers was eager to get into the fray, the thunder of which could be of course plainly heard by them all. He turned to General Elliott and directed that the second brigade begin to move by the left into the wood. Hardly had it emerged on the plain beyond when a peremptory order came from Sackville to halt.

In the meantime, orders repeating and confirming the Duke's wishes had been again received by Lord George. Captain Wintzingrod had no sooner left field headquarters than the Duke, who may have had a momentary misgiving as to the reliability of his original messenger, dispatched Captain Edward Ligonier to confirm his commands. Ligonier arrived at Hartum just after the Hessian had turned away and just before Fitzroy appeared. The first British officer of senior rank that he encountered was Col. Robert Sloper of the Dragoon Guards. Sloper was furiously cursing the unexplained delay.

"For God's sake, Ligonier," he begged, "if you have orders for us to go into action, make them clear to him so he can't pretend not to understand! Half an



A private of the 20th Foot at Minden.  
Sketch based on contemporary drawings  
and regulations.

hour ago he got an order to advance, and we are still here!" It was actually only fifteen minutes, but the exaggeration was perhaps pardonable.

When Ligonier delivered his message to Sackville, His Lordship made no reply. He did turn to his troops, draw his sword and order a march—but straight forward, towards the windmill. The aide protested that the advance must be to the left, through the wood. While they were discussing it, Colonel Fitzroy appeared and excitedly began to express the annoyance of the Duke that as yet no attention was being paid to his commands. Sackville coldly cut him short.

"Don't get excited Colonel, try and give me your orders calmly and distinctly!"

Fitzroy, apologizing for being out of breath with galloping, stated that the commander-in-chief desired now that the British cavalry only should move, leaving the Hanoverian squadrons in reserve.

"But," objected Lord George, "these orders are conflicting and contradictory. Captain Ligonier says that we all should move!"

"The orders conflict only as to numbers, My Lord," exclaimed both the aides.

"It is a glorious opportunity," added Fitzroy, "for the English to distinguish themselves, and Your Lordship by leading them will gain immortal glory!"

His Lordship, however, did not appear to be interested just then in immortal glory. He looked to the front, towards Hahlen, and sent out an aide, Captain Hugo, to move the Saxe-Gotha regiment aside. He would not permit Granby and Elliott to continue their advance and gave no evidence of any immediate intention of getting into the battle. Fitzroy, leaving Ligonier to continue the argument, returned to the Duke and was instantly ordered back to the right wing. When he asked to whom he should now deliver his commands, Brunswick told him angrily,

"To Lord Granby, as I know *he* will obey my orders!"

Returning to the right, Fitzroy found that Granby was now through the wood and forming in line on the heath, some distance forward of Sackville's first line. Whether or not the aide suggested to him that he might now disregard his chief's halt order, does not appear. Perhaps he refused to disobey Lord George even with the approval of the commander-in-chief. At any rate, he held the brigade motionless, and Fitzroy went on to have another try at the dilatory Sackville. At Hartum the latter had now decided to permit the first brigade to traverse the wood, but he announced that before any general advance was made he must interview the Duke in person. Guided by Fitzroy, he rode off to find headquarters, some distance beyond the center. The English infantry was then nearly a mile in front and the close of the battle imminent. Pointing to his division being drawn up on the level ground north of the woods, Sackville began to explain that his orders appeared to him to be contradictory. Exactly what was it that His Highness desired of the cavalry?

His Serene Highness, his serenity by this time more than a little disturbed, observed succinctly,

"It is now too late to matter, My Lord!" He suggested, however, that the cavalry move on down the plain and "sustain the infantry." Lord George returned to his troops and began a long-drawn-out process of getting them aligned to his satisfaction. Before the ranks were nicely dressed, the intervals and distances carefully checked, the French withdrawal had been completed. Urff, Imhoff and the Duke of Holstein were turning back, Waldegrave and Kingsley were assembling in column. The battle of Minden was over.

In the Allied army the casualties mounted to 2,600, the largest proportion being naturally among the English infantry regiments and batteries. These lost 14 officers and 281 men killed, with 65 officers and 969 rank and file wounded. The French left about 7,000 on the field, with 45 guns and 17 stands of colors. Because the Hereditary Prince defeated de Brissac decisively at Göhfeld on the same day, and immediately moved down to the defiles above Minden, cutting off the French retreat by Herford, de Contades was obliged to cross the Weser and fall back to Cassel on the right bank. His baggage was captured at Detmold, and the publication of his private correspondence with Belleisle, the French War Minister, which revealed his instructions for the ruthless devastation of Westphalia and Hanover, did immense damage to the French cause.

On the night of August 1, when Lord George Sackville sauntered unconcernedly into the Duke's headquarters mess for supper, he was surprised and indignant at the chilliness of his reception. Brunswick turned to a table companion, and in a voice audible to all in the room, remarked:

*"Voilà cet homme, autant à son aise comme s'il avait fait des merveilles!"* In a general order published to the army on the following day, the Duke pointedly refrained from any mention of Sackville by name. After specially commending nearly all the other general officers, he added a significant paragraph in which he stated his opinion that had the cavalry of the right wing been commanded by Lord Granby, it would, without doubt, have contributed much to a more decisive victory. When Lord George, stung by this slight, protested its injustice, the Duke replied formally:

It is a source of mortification to me, My Lord, to have to engage with you in a discussion on so disagreeable a subject as that treated in the letter you sent me last evening by your aide-de-camp Keith, after a conversation of a distressing nature in the afternoon with your aide General Hotham, when he spoke to me on your behalf on the same subject. I thought that in that conversation I had fully covered the points which he brought up and that I would not be obliged to explain my position further.

I will simply say that I have not been able to regard with indifference what was done by the cavalry of the right wing. You were in command of the entire British corps, so your post should not have been fixed solely with the cavalry. It was your duty to lead them or the others (i. e. the infantry) as you discovered the occasion demanded, in order to cooperate in the success of a day so glorious for the army.

I supplied you with the best possible occasion, from which you could profit and decide the outcome of the day, if my orders had been carried out to the letter. The tribute which I paid to Lord Granby was due him because he has never failed me in any instance. I am not bound by any rule that when I praise one of my subordinates I must necessarily be considered as blaming another. But I certainly cannot be expected to overlook a failure to execute my orders and a refusal to accept, in good faith, such orders from those whom



LORD GEORGE SACKVILLE

From the engraving by S. W. Reynolds after the painting by Sir Joshua Reynolds at Drayton  
Manor. Courtesy of the Frick Art Reference Library.

I delegate to carry them. I beg you, My Lord, to spare me the necessity of going into the matter in greater detail than this.\*

Ten days later he wrote to London suggesting that Sackville be recalled from Germany<sup>10</sup> but Lord Holderness, the Secretary of War, anticipated him and on the fourteenth sent orders to Lord George to turn over his command to Granby and return to England.<sup>11</sup> Pitt, at the instance of Lord Bute and the Prince of Wales, consented to soften the letter of recall to the extent of granting permission to return, but when the culprit arrived in London on September 7 the Premier told him flatly that he found nothing in his excuses and explanations to warrant further assistance. At home the noble Lord was greeted by a veritable hurricane of execration and popular indignation. He was publicly branded as a coward. Publishing at once a pamphlet address "To the English Public," he begged that judgment be suspended until all the facts were known. He demanded a court-martial. This Pitt allowed him some six months later when a sufficient number of officers of high rank could be assembled and the witnesses brought back from the Continent.

The old King, who had bitterly opposed the appointment of Sackville to the command in Germany, furiously struck his name from the privy council books, dismissed him from the Army and deprived him of his many offices and perquisites.<sup>12</sup> When the court met for his trial in February, 1760, under the presidency of General Sir Charles Howard, Lord George defended himself with energy and skill, "his demeanor haughty and undaunted." The incidents of the battle were reviewed in great detail. The court found him guilty of disobedience of orders, but was unable to sentence him to the fate of the luckless Byng because he was no longer in the military service. They adjudged him "unfit to serve His Majesty in any capacity whatsoever."<sup>13</sup> The King had the sentence read aloud to every regiment in the Army from Quebec to Pondicherry.

Historians have not yet been able to formulate a convincing and satisfactory explanation of Sackville's defection at Minden. The contemporary theory, popularly accepted, of personal cowardice, is incredible. The man had displayed marked courage at Fontenoy, where he had been wounded far within the enemy lines. The savage old Duke of Cumberland not only testified to his bravery but found in him "a disposition to his trade which I do not always find in those of higher rank." He fought duels without flinching and had been under fire many

\* Brunswick to Sackville, Minden, Aug. 3, 1759, *Hist. MSS. Comm.*, *op. cit.*, p. 80. (Present author's translation).

<sup>10</sup> Brunswick to Holderness, Aug. 13, 1759, *Hardwick Papers*, British Museum, add. MSS 35893, f. 216.

<sup>11</sup> Holderness to Sackville, London, Aug. 14, 1759, *Hist. MSS. Comm.*, *op. cit.*, 81. Sackville received the order on the twenty-second and arrived in London on Sept. 7.

<sup>12</sup> "I have His Majesty's commands to let you know that he has no further occasion for your service as Lieut.-General and Colonel of Dragoon Guards." Lord Barrington (War Office) to Sackville, London, Sept. 10, 1759, *Hist. MSS. Comm.*, *op. cit.*, 81.

<sup>13</sup> *Proceedings of Court-Martial*. Sackville's opportunities for mischief were not ended by his disgrace after Minden. On the death of George II he returned to favor, re-entered politics and rose (as Lord George Germaine) to Cabinet rank. His ineptitude in office during the American Revolution is well known.

times. Professor Leadam dismisses the mystery with the remark that Lord George was a man "whose courage fluctuated and on this occasion failed him altogether." Smollett, a contemporary but not an unprejudiced observer, ardently defends him. Lord Mahon, whose historical writings are undoubtedly colored by his political views, inclines to the opinion that Sackville was swayed "by one of those panics to which men of quick genius are sometimes prone." Yet the same author remarks rather sapiently that for Lord George to appear on the night of the battle, at the Duke's supper table "required full as much courage as to have led his cavalry to the charge." Colonel Whitton, in an exhaustive study of the trial, carefully analyzes the evidence and arrives at the conclusion that the defendant has been misjudged by history. The theory of the German biographer of Pitt, Herr von Ruville, seems to be the most plausible—that Sackville was hoping to secure the supreme command and displace Brunswick, and was therefore unwilling to lend his German chief any but the most perfunctory cooperation.

\* \* \*

Nevertheless, to the other Allies who fought at Minden it was a glorious day. Duke Ferdinand, having with fewer than 40,000 men decisively defeated 60,000 French, was hailed as the second military genius of the time. He was rewarded with the Garter, a gift of 20,000 pounds sterling, and a pension of 2,000 pounds a year. His nephew the Hereditary Prince, whose defeat of de Brissac at Göhfeld contributed materially to the success of the campaign, received from his illustrious great-uncle at Potsdam a munificent recompense which it is hoped he appreciated; the thrifty Frederick sent him a thirty-three verse ode composed by himself! To the six regiments of British infantry that proudly bear the name of Minden on their colors must be accorded the glory of having demonstrated once again how nearly invincible were the eighteenth century redcoats, when competently led by officers in whom they had confidence. As Jomini briefly observes, they earned and were entitled to "the highest encomiums."

\* \* \*

*Bibliography of the principal printed sources for the Westphalian Campaign of 1759 and the Battle of Minden including biographical articles of particular interest.*

#### GERMAN

- Knesebeck, Ernst Julius Georg, von dem, *Herzog Ferdinand von Braunschweig während des Sieben-jährigen Krieges* (2 vols., Hannover, 1857).
- Westphalen, C. H. P. von, *Geschichte der Feldzüge des Herzogs Ferdinand von Braunschweig-Lüneburg* (6 vols., Berlin, 1859, 1871, 1872).
- Daniels, E., *Preussische Jahrbücher*, LXXIX, 299 ff. and plan.
- Tempelhof, Georg Friedrich von, *Geschichte des Sieben-jährigen Krieges . . .*, (6 vols., Berlin, 1877). This edition includes, in vol. III, a magnificent plan of the Battle of Minden.
- Mauvillon, Jacob, *Geschichte Ferdinands Herzogs von Braunschweig-Lüneburg* (2 vols., Leipzig, 1794).
- Schaper, Christoph von, *Vie militaire du maréchal prince Ferdinand, Duc de Brunswick . . . pendant la guerre de sept ans en Westphalie* (2 vols., Magdeburg and Nürnberg, 1796, 1798).

Schaefer, Arnold D., *Geschichte des 7 Jährigen Krieges* (2 vols., 1867-74).  
 Renouard, Karl R., *Geschichte des Krieges in Hannover, Hesse und Westphalen in den Jahren 1757-1763* (3 vols. Cassel, 1863-64).  
*Deutsche Allgemeine Biographie* (Leipzig, 1875-1910).

## FRENCH

Waddington, M. Richard, *La Guerre de Sept Ans* (4 vols., Paris, 1899).  
 Jomini, Baron Antoine Henri, *Traité des Grandes Opérations Militaires* (1804-1805) (English trans. by S. B. Holabird, 2 vols., N. Y. 1865).  
 Larousse, *Grand Dictionnaire Universelle* (Paris, 1866-1890).

## ENGLISH

Fortescue, Sir John W., *History of the British Army* (12 vols., London, 1899).  
 Whitton, Lt. Col. F. E., *Service Trials and Tragedies* (London, 1930).  
*The Annual Register for 1759 and 1760.*  
*Dictionary of National Biography* (N. Y. and London, 1900).  
 Von Ruville, Albert, *William Pitt, Earl of Chatham* (3 vols., N. Y. 1907; trans. from the German).  
 Williams, Basil, *Life of William Pitt, Earl of Chatham* (2 vols., London, 1913).  
 Norman, C. B., *Battle Honours of the British Army* (London, 1911).  
 Carlyle, Thomas, *The History of Friedrich the Second, called Frederick the Great* (6 vols., N. Y. 1866).

Walpole, Horace, *The Letters of Horace Walpole* (9 vols., London, 1866).  
*Memoirs of the Last Ten Years of the Reign of George II* (London, 1846).  
*The Proceedings of a General Court-Martial, Held at the Horse Guards on Friday the 7th and continued by several adjournments to Monday the 24th of March, 1760, and of a General Court-Martial held at the Horse Guards on Tuesday the 25th of March and continued by several adjournments to Saturday, the 5th of April, 1760, Upon the Trial of Lord George Sackville* (Published by authority, Edinburg, 1760).  
*The Trial of the Right Honourable Lord George Sackville, at a Court Martial held at the Horse Guards February 29, 1760, For an Enquiry into his Conduct Being charged with disobedience of orders while he commanded the British Horse in Germany; Together with His Lordship's Defence* (London, 1760).

*Report of the Royal Commission on Historical Manuscripts* (15 vols.; 9th Rpt.), vol. IX, Part 3, has the Sackville letters from the Stopford-Sackville Papers, as well as other letters and documents bearing on the campaign.

Watts, Robert, *Bibliotheca Britannica* (4 vols. London and Edinburg, 1824). Contains in Part II, under the heading "Sackville," a list of all or most of the many printed pamphlets which appeared after Minden, attacking and defending Lord George. A few of these are in the New York Public Library and others are in the Library of Congress.

Undoubtedly much interesting and revealing source material on the campaign is preserved in the State Archives of Hanover, Hesse and Prussia, at Hanover, Cassel and Potsdam. Information regarding this is, unfortunately, not available at the present time. The Historical Section of the Army Archives at Potsdam very courteously supplied me (through Lt. Col. Truman Smith, Military Attaché) with certain valuable data on the location of source matter, but direct inquiries addressed to individuals in Germany have been made to no avail.

# AMERICAN ADOPTION OF FRENCH ARTILLERY 1917-1918

By H. A. De Weerd

**A**MONG the military improvisations forced upon the United States by the demands of war in 1917, none had greater or more unexpected consequences than the adoption of foreign equipment as the principal artillery weapons of the A. E. F. Though some nations have relied out of necessity for their entire artillery equipment on foreign purchases, the spectacle of a great state famed for its industrial development and mechanical aptitudes abandoning all its own artillery matériel for combat purchases after war was declared and adopting the models of another state is unique. The record of this departure from tradition contains many interesting lessons for the United States.

Past experience seemed to demonstrate the futility and hazard of relying on foreign purchase for the hasty increase of American military equipment. Although this was hardly true in the case of the American Revolution, it was clearly revealed in the Civil War and in the Spanish-American conflict. In 1861, for example, certain European states were in a position to sell the Federal Government large numbers of muskets. Since the Civil War was primarily a struggle of infantry, this fact seemed promising on the surface. Up to 1862 the North purchased 726,705 muskets in Europe at the cost of \$10,000,000.<sup>1</sup> Of this number only 116,740 were serviceable Enfields, and 48,108 were of the French official type.<sup>2</sup> The rest were of small military value, and their employment added to the confusion of calibers and to the ammunition supply problem.<sup>3</sup>

Small arms are more easily manufactured than artillery units, so the latter provides the soundest basis on which to judge the wisdom and success of a policy of relying upon foreign ordnance types. When the war with Spain broke out in 1898, the artillery equipment of the American Army amounted to one hundred and twenty-three 3.2-inch field guns, twenty-two 3.6-inch field guns, twenty-two 3.6-inch howitzers, and a few siege batteries.<sup>4</sup> Though there was little balance to be observed in this stock of equipment, it was deemed sufficient in 1898 to equip ten regular and sixteen volunteer batteries. The artillery ammunition supply, however, was extremely limited. Only 28,100 rounds of

<sup>1</sup> *Official Records, Series III, Vol. I, p. 418; Vol. II, p. 855.*

<sup>2</sup> *Shannon, Organization and Administration of the Union Armies (Cleveland, 1928) Vol. I, p. 123.*

<sup>3</sup> Iowa troops for example were equipped with Austrian muskets, Prussian muskets, Belgian rifles, Harpers Ferry Muskets, Spencer carbines, Sharp carbines, Whitworth rifles, Minié rifles, and other less well-known types. *Ibid., I, 118, 125.*

<sup>4</sup> *Report of the Chief of Ordnance 1898, (Washington, 1898) p. 21.*

ammunition were available for all the field batteries.<sup>5</sup> Under these circumstances the Chief of Ordnance attempted to relieve the artillery situation by foreign purchase. He was able to secure thirty-four 4.7-inch Armstrong guns in England with 300 rounds of ammunition per gun—all that was available for immediate delivery.<sup>6</sup> In addition he purchased for later delivery eight 6-inch guns in England. Since we had no weapons of similar caliber, these purchases complicated our ammunition problem without adding greatly to the strength of the artillery arm. Fortunately for the United States the short duration of the war did not expose the weakness of the army in the matter of artillery.

Some of the criticisms of War Department administration in the Spanish War are of value as a background to the difficulties which arose in 1917.<sup>7</sup> There was a notable lack of balance in the American ordnance program prior to the war with Spain, for on its outbreak the War Department had more guns on hand than carriages, more guns and carriages in proportion than artillery projectiles, and more projectiles than powder.<sup>8</sup> Since the military effectiveness of artillery is limited to the component on hand in the smallest quantity, this was a serious maladjustment. Though the army adopted a standard caliber for Army, Navy, and Marine Corps shoulder arms after the war no similar simplification seemed to be possible for the artillery.<sup>9</sup> The result was that although at the outbreak of war in 1917, the United States possessed what many soldiers believed was the best military rifle in the world, the artillery situation could only be described as chaotic.

The American artillery program was in a formative state in 1917. The Greble Board appointed in 1911 to survey the artillery needs of the army had recommended 3.16 guns per thousand men as a basis for organization and advocated no caliber heavier than 6-inch.<sup>10</sup> Under the impulse of the war in Europe the Treat Board was appointed on April 17, 1915 to consider the same field covered by the Greble Board and to make recommendations.<sup>11</sup> When this board was authorized the artillery equipment of the American Army was as follows:<sup>12</sup>

<sup>5</sup> *Ibid.*, p. 22.

<sup>6</sup> *Ibid.*, p. 21.

<sup>7</sup> Cf. *Report of the Commission Appointed by the President to Investigate the Conduct of the War Department in the War with Spain*. Senate Doc., No. 221, 59th Congress, 1st Session. 8 Vols. (Washington, 1910).

<sup>8</sup> *Report of the Chief of Ordnance 1898*, p. 9. The Ordnance Department normally ordered more guns than gun carriages on the assumption that the former required more frequent replacement than the latter.

<sup>9</sup> The decision to adopt a standard caliber for small arms paved the way for the adoption of the U. S. Rifle Caliber .30, Model 1903. Cf. *Report of the Chief of Ordnance 1899*, p. 11.

<sup>10</sup> *Hearings Before the Senate Committee on Military Affairs*, 64th Congress, 1st Session. (Washington, 1916) p. 523.

<sup>11</sup> Special Order No. 89, War Department, April 17, 1915.

<sup>12</sup> *Proceedings of a Board of Officers, Appointed by Special Order No. 89, War Department*. April 17, 1915, p. 2-3. Hereinafter cited as *Proceedings*. Except where otherwise stated documents referred to in this paper or authentic copies are to be found in the Mail and Record File of the Ordnance Department, U. S. A.

<i>Unit</i>	<i>With Troops</i>	<i>In Reserve</i>	<i>In Manufacture</i>	<i>Ammunition</i>
2.95-inch mt. gun ....	56	24	0	56,000
3-inch mobile howitzer .....	0	4	0	3,500
3-inch field gun .....	412	120	80	829,000
3.8-inch howitzer .....	0	28	32	32,000
3.8-inch field gun .....	0	8	0	2,000
4.7-inch howitzer .....	16	40	42	48,500
4.7-inch field gun ....	16	22	22	33,000
6-inch howitzer .....	8	24	24	21,000

The want of balance and the multiplicity of light artillery types in this interesting collection of weapons need scarcely be pointed out.

The Treat Board evidently thought there was a great deal of dead wood in the artillery establishment, for it applied the axe vigorously. It advocated an organization on the basis of 4.9 guns per thousand men. It called for a new 3-inch field gun with greater elevation, traverse, and range. It recommended a new carriage for the 4.7-inch field gun to permit an elevation of 40 degrees and a range of 13,000 yards. It advised the addition of very heavy artillery in the form of 7.6-inch, 11-inch, and 16-inch howitzers. The demand for super-heavy artillery for the American Army in 1915 can only be described as revolutionary, since guns of this caliber were obviously designed for use against heavily fortified works. No such works existed on the American continent, nor were there many roads capable of sustaining their transit. This seemed to foreshadow a campaign outside the American theatre of war.

The Treat Board concluded its remarkable report with a recommendation that sufficient mobile artillery be constructed to equip a force of one million men. This program included the following:<sup>13</sup>

<i>Unit</i>	<i>Number of guns</i>	<i>Rounds per gun</i>
3-inch field gun	1968	5022
3.8-inch howitzer	936	4506
4.7-inch field gun	312	3491
4-inch howitzer	312	2604
7.6-inch howitzer	104	2300
11-inch howitzer	72	923
16-inch howitzer	No recommendation.	

The completion of this program would have required the expenditure of \$480,000,000, over a period of eight years.<sup>14</sup>

The officers of the Treat Board stressed the slow process of artillery manufacture, anticipated a delay of at least eighteen months in any large scale production schedule, and feared that a much longer delay would result from the shortage of skilled workers.<sup>15</sup> General Crozier, the Chief of Ordnance in 1915, frequently warned Congressional committees about the time required for artillery construction. He estimated that to produce artillery ammunition on the scale

<sup>13</sup> *Ibid.*, Appendix I, p. 22.

<sup>14</sup> *Annual Report of the War Department 1919*, Vol. I, Part IV, pp. 3868-3869.

<sup>15</sup> *Proceedings*, Appendix I, p. 9.

of expenditure in Europe would require up to 100 times the capacity of Frankford Arsenal, the principal agency for such production in the United States.<sup>16</sup> The Acting Chief of Ordnance in January 1917 estimated that two and a half years would be required for the construction of artillery units contemplated in the report of the Treat Board.

One result of the report described above was the development of a new carriage for the 3-inch field gun. This gun known as the "3-inch field gun model 1916" had a split trail, 53 degrees elevation, and 45 degrees traverse. These were features possessed by no other field gun in the world.<sup>17</sup> The only feature lacking was a dependable recoil mechanism. The pilot model, equipped with a hydro-spring recuperator, was under manufacture on April 6, 1917. Certain steps were also taken to modernize the carriage of the 4.7-inch field gun. Such in general was the status of changes in American artillery matériel at the outbreak of war.

It has frequently been pointed out in criticism of the War Department in 1917-1918, that, although the General Staff received information regarding artillery experience abroad, it failed to make adequate use of this information to bring our methods in line with World War experience. The following criticism is typical:

Almost from the outbreak of war in August 1914, we succeeded in placing observers with the various armies in the field. Reports of these observers were filled with data showing the deficiencies of our own military organization for war on a modern scale and the obsolescence of most of our matériel. On these reports might have been based a complete rejuvenation of our designs and methods . . . but the reports were filed away in the archives of the War College to gather dust of official neglect.<sup>18</sup>

It seems impossible that the writer of this quotation took the trouble, while he was Assistant Secretary of War, to disturb the dust on these records. For if he had done so he would never have been able to frame such an eloquent condemnation of the General Staff and Ordnance Department.<sup>19</sup> There was very little useful information in the reports of our observers and military attachés in Europe. General Crozier frequently complained of the lack of detailed

<sup>16</sup> Brigadier General William Crozier had been Chief of Ordnance since 1901 when he was appointed to that office as a mere captain over the heads of many senior officers. He was widely known for his work on the Buffington-Crozier gun carriage and had intimate knowledge of the whole field of ordnance. See his testimony in *Hearings Before the House Committee on Military Affairs on House Res. No. 12766, 64th Congress, 1st Session*. (Washington, 1916) Vol. I, pp. 486-512.

<sup>17</sup> Report Col. J. B. Rose to Chief of Ordnance, January 10, 1919. MS in Ordnance Technical Library. The French 75mm field gun Puteaux Model 1897 had 15-20 degrees elevation and only 8 degrees traverse. *History of the 75mm Field Gun M1897*. Army Ordnance Confidential Publication No. 1862. p. 35.

<sup>18</sup> B. Crowell and R. F. Wilson, *The Giant Hand* (New Haven, 1921), pp. xiv-xv.

<sup>19</sup> Officers at the War College who examined these papers for me declared that they contained very little definite information. On December 9, 1915, Col. Spencer Colby, Military Attaché at Paris, said it was "almost impossible to get any reliable and definite data concerning many of the practices and results of actual experience in the French Army."

technical information.<sup>20</sup> There were plenty of wordy general observations but accurate scientific information was almost entirely lacking. It was not until the Ordnance Department sent Major L. T. Hillman on a special mission to Europe in 1916 that the United States Government was able to obtain the kind of accurate technical information desired on the ordnance experience of the Allied armies.<sup>21</sup> Major Hillman, it should be stated, was prepared to purchase information and designs.

Major Hillman visited England late in 1916 where the Ministry of Munitions showed him all types of ordnance equipment and provided him with photostatic copies of drawings.<sup>22</sup> They gave him all the information he asked for except figures on production. He found Armstrong-Vickers willing to sell designs for heavy howitzers, and the War Office agreeable, but the Foreign Office refused to sanction their transfer until after the United States entered the war.<sup>23</sup> He purchased designs for the 9.2-inch and the 12-inch Vickers howitzer. The French government at first refused to receive Major Hillman, but on learning that he was going to England anyway and might purchase designs for heavy artillery, they allowed him to see the 155mm matériel at St. Chamond and Le Creusot.<sup>24</sup> As a result of his visit to France he was able to acquire the rights to manufacture the St. Chamond recuperator for the U. S. 3-inch field gun model 1916 as well as designs for Schneider and St. Chamond heavy and railway mounts.<sup>25</sup> With the acquisition of these designs and the vast mass of detailed information Major Hillman was able to collect, the War Department for the first time had the kind of information needed in order to take advantage of European experience in the World War.<sup>26</sup> But by this time the United States had been drawn into the war.

In fact, the day on which war was declared Major Hillman was conferring in Paris with officers of the Bureau of Exterior Operations of the French General Staff. In reporting this conference he tactfully pointed out that while the French General Staff did not necessarily assume that an American expeditionary force would be sent to France, they advised great increases in machine guns and artillery in the existing American tables of organization should one be sent.<sup>27</sup> This recommendation swept aside the estimates on which the War

<sup>20</sup> Memorandum Chief of Ordnance to Chief of Staff, April 25, 1916.

<sup>21</sup> Letter Chief of Ordnance to A. G. O., August 21, 1916.

<sup>22</sup> The Chief of Ordnance had assured the British Ambassador to the United States that while preserving a correct official attitude Major Hillman's personal sympathies were with the Entente Allies. Letter Chief of Ordnance to Sir Cecil Spring Rice, July 29, 1916.

<sup>23</sup> Letter Hillman to Chief of Ordnance, April 21, 1917.

<sup>24</sup> Cable Hillman to Chief of Ordnance, May 18, 1917.

<sup>25</sup> Letter Hillman to Chief of Ordnance, May 10, 1917.

<sup>26</sup> Of importance to the later adoption of French artillery models was the information obtained in England regarding the weaknesses of the British hydro-spring recoil system revealed by the prolonged fire periods of trench warfare.

<sup>27</sup> Hillman to Chief of Ordnance, April 6, 1917.

Department had been operating up to that time. In March 1917 the Ordnance Department drew up tentative schedules for arming and equipping a force of one million men. The only artillery weapon which it seemed possible to provide in anything like the required numbers was the 3-inch field gun.<sup>28</sup> Unfortunately the 1902 model was not thought to possess sufficient range for combat use in Europe, and the St. Chamond recuperator just purchased in France had not yet been tried on the model 1916 carriage.<sup>29</sup> Thus a combination of circumstances seemed to render the prospect of producing even light artillery doubtful. It is worth noting that in the estimates of March 1917 the Ordnance Department was preparing to produce more shrapnel than high explosive shell in spite of the fact that England and France were using 70% of the latter to 30% of the former.<sup>30</sup>

The scope of projected American military operations in France was not clearly defined until General Pershing sent his "General Organization Project" to the War Department on July 10, 1917.<sup>31</sup> It envisaged the shipment of 30 American divisions to France in 1917 and 1918. This remained the basis of the American program until July 18, 1918, when General March, Chief of Staff, submitted a program to the Secretary of War calling for the shipment of 80 divisions to France by June 1, 1919. With a total of 15 divisions in the United States, the total strength of the American Army in June 1919 would be 4,850,000 men.<sup>32</sup>

These rather staggering figures made the task of procuring artillery for the projected armies seem impossible. Two decisions of policy by the government soon removed all doubt on the matter. It was decided to allow no interference by the Ordnance Department with facilities occupied with military orders for the Allied governments and to allow the Navy priority on needs which could be completed within a year.<sup>33</sup> Depressing information about the speed of American manufacture of artillery was offered by the British Ministry of Munitions. The Bethlehem Steel Company which had agreed to deliver fifteen 9.2-inch howitzers in seven months required sixteen months to complete one.<sup>34</sup> The record of the Midvale Steel Company was not much better. This did not promise well for the new manufacturing facilities on which the Ordnance Department would be forced to rely for the bulk of its artillery program. The Bethlehem Steel Company and the Midvale Steel Company were among the few American firms with prior experience in ordnance manufacture.

<sup>28</sup> Memorandum Col. J. H. Rice to Col. C. C. Williams, March 20, 1917.

<sup>29</sup> Report Col. J. B. Rose to Chief of Ordnance, January 10, 1919.

<sup>30</sup> Statement of Mobile Artillery Ammunition Required to Complete the Allowance for a Million Men and to Meet the Needs of the First Year of War, March 27, 1917. MS in Ordnance Department Files.

<sup>31</sup> Pershing, *My Experiences in the World War* (New York, 1931), I, p. 102.

<sup>32</sup> Report of the Chief of Staff, 1919, pp. 9-10.

<sup>33</sup> Minutes of the Council of National Defense, Vol. I, p. 163.

<sup>34</sup> Memorandum Col. R. L. Kenyon to Chairman General Munitions Board, May 17, 1917.

General Crozier was fully aware of these facts when he prepared a very candid memorandum on the artillery situation for the Secretary of War on April 30, 1917. He admitted that there would be no increase in the available artillery for six months except in the 3-inch class, and these guns were described as not suitable for combat purposes. He appeared to be weighing the question of adopting foreign models, but argued against it at this time on the ground that such an adoption would throw back the artillery program in point of time and would confuse the ammunition supply problem.<sup>35</sup>

The prospect of using foreign models of artillery for combat purposes while retaining American models for training at home seemed to be raised in a conference on May 25, 1917, between General Crozier and M. J. M. Ganne, Directeur des Services de Fabrications de Guerre du Haut Commissariat and Colonel Remond of the French Military Mission to the United States. The results of this conference were confirmed by a letter on the following day which stated:

The French Government should appreciate particularly if the United States Army, the day it comes to fight with the French front, is supplied, at least partially, with types of ordnance identical to those in service with the French Army . . . The French Government is of the opinion that standardization of ordnance, or at least of ammunition should facilitate military operations, particularly the replenishment of stores . . . The French Government has decided from now on to place at the disposal of the American Government all the drawings, specifications, etc., of our types of ordnance and ammunition.

Beginning with August 1, 1917, the French Government can supply five 75mm field guns per day with an initial supply of 1,000,000 rounds of ammunition. From October 1, 1917, it can supply two 155mm howitzers daily with an initial supply of 100,000 rounds of ammunition and a daily supply of 6,000 rounds . . .<sup>36</sup>

This definite offer of assistance in the matter of artillery came shortly after the British Military Mission had advised that no aid could be expected from England in the matter of artillery until late in 1917 or early in 1918.<sup>37</sup>

After considerable discussion a decision was made on June 5, 1917, to adopt the French 75mm caliber in place of the 3-inch and the French 155mm in place of the 6-inch and to modify existing artillery matériel to use French ammunition. This decision was communicated to the army on June 9, 1917, by the A. G. O. which explained that "there was no prospect otherwise of obtaining the number of cannon required for the successful prosecution of the war."<sup>38</sup> On July 9 formal orders were placed for 155 batteries of 75mm field guns and 65 batteries of 155mm howitzers with the French Military Mission. The adoption of French calibers seemed to be in harmony with the traditional American respect for French military institutions and thought and was reported to the French Press in a triumphant statement written by M. André Tardieu on

<sup>35</sup> Memorandum Chief of Ordnance to Secretary of War, April 30, 1917.

<sup>36</sup> Letter M. J. N. Ganne to Chief of Ordnance, May 26, 1917.

<sup>37</sup> Letter W. T. Layton to the General Munitions Board, May 14, 1917.

<sup>38</sup> Letter A. G. O. to Chief of Ordnance, June 9, 1917.

Bastille Day.<sup>39</sup>

The artillery ordered was to be supplied to the American troops as needed for training and combat in France. Its acquisitions seemed at first sight to solve many problems and the decision to employ French matériel was widely applauded. The unfortunate aspects of the decision and the complications which followed did not become apparent until later.

Thirty-five 3-inch field guns had been completed in the United States since April 6th. They had to be re-lined and then re-bored to 75mm. caliber. Changes in the orders for 870 guns of similar caliber under contract had to be made. Just five days before the decision to adopt the French calibers orders for 9,000,000 rounds of 3-inch ammunition had been placed.<sup>40</sup>

Complete interchangeability of ordnance components had long been the dream of soldiers charged with the maintenance of weapons in the field. Steps in this direction were taken in the United States in the production of the U. S. Rifle Model 1903 and were later greatly advanced in the rapidly growing automobile industry. American practice in 1917 was considerably in advance of European. A decision to produce 75mm ammunition on an interchangeable basis in the United States caused work on these orders to be halted pending the arrival and translation of French drawings. When these papers arrived it was seen that the French shrapnel shell was so distinctly inferior to the American type that the Ordnance Department decided against interchangeability with the French matériel in this particular. The French 75mm high explosive shell fuze did not provide a bore safety device which up to our entrance into the war was regarded by the Ordnance Department as a primary requisite of a satisfactory detonating fuze.<sup>41</sup>

To add to the confusion there were several different drawings of each component of the 75mm high explosive shell sent to the United States, and no member of the French Military Mission had definite information on which one was in current use in the French service. Officers had to be sent from France to advise on these matters.<sup>42</sup> When 75mm high explosive shells arrived from France as working models they did not conform to any of the drawings. The work of correcting and translating the French specifications of the 75mm shells was not completed until December 1917.<sup>43</sup>

Similar difficulties were experienced in the attempt to prepare for the manufacture of the 155mm howitzer and the 155mm G. P. F. (Grande Puissance Filloux) gun in the United States. Numerous errors were discovered in the

<sup>39</sup> The original longhand copy written in English by M. Tardieu for General Crozier bears testimony of his rugged but imprecise command of the English language. MS in Ordnance Department Files.

<sup>40</sup> Memorandum Control Bureau Ordnance Department to Chief of Ordnance, April 24, 1918.

<sup>41</sup> *Ibid.*

<sup>42</sup> *Ibid.*

<sup>43</sup> Major F. C. Cheston, "Early History of the Projectile Section of the Ordnance Department," p. 4. MS in Ordnance Technical Library.

drawings of the 155mm howitzer and the 155mm G. P. F. gun; 20,000 man hours were required for the correction and translation of the drawings of the latter weapon.<sup>44</sup> Tools sent from France for assembling the 155mm howitzer did not correspond to either the French or the American drawings. These difficulties revealed the fact that while the American Government was attempting to produce these weapons on an interchangeable basis, the French had achieved interchangeability of only a few large parts.

Up to February 1918 the United States did not commit itself to the adoption of the 75mm field gun Puteaux model 1897, for manufacture in the United States. On January 1, 1918, only five 75mm field guns were completed in the United States.<sup>45</sup> These were adaptions of the British 18-pounder field gun constructed by the Bethlehem Steel Company and described as "the poorest mount in the service."<sup>46</sup> The hopes placed in the model 1916 carriage seemed to be doomed. The pilot model of this type produced by the Bethlehem Steel Company ruptured its piston liners in trials at Sandy Hook Proving Ground on December 10, 1917.<sup>47</sup> The pilot model of the Rock Island Arsenal broke a pintle bearing while being driven across a railway track.<sup>48</sup> Meantime General Pershing poured cold water on the plan to employ the St. Chamond recuperator on this model. He cabled on November 28, 1917, that the French government had several times tried the St. Chamond brakes and had never found them successful and had no confidence in the design.<sup>49</sup> This was hardly true since the St. Chamond Company (*Cie des Forges et Acieres de la Marine et d'Homecourt*) had designed all the turrets in recent French battleships and their hydro-pneumatic brake had given successful service in the French Navy for seven years.<sup>50</sup> General Pershing, it will be seen, later reversed his recommendation, and after the Puteaux model 75mm field gun had been adopted, he added to the confusion by advocating the St. Chamond brake.<sup>51</sup> On February 8, 1918, after a number of ordnance officers had expressed belief that the Puteaux model would be easier to manufacture than the model 1916 gun, it was decided to adopt it for manufacture in the United States.

Meantime the 75mm field gun Puteaux model 1897 was being tried out side-by-side with the American 3-inch field gun model 1905 at the School of Fire at Fort Sill, Oklahoma.<sup>52</sup> The report of the test follows:<sup>53</sup>

<sup>44</sup> *History of the 155-mm Artillery Project*, Army Ordnance Confidential Publication No. 1863, p. 41, 42.

<sup>45</sup> Council of National Defense, *Statistical Report No. 20*, p. 1.

<sup>46</sup> Report Col. J. B. Rose to Chief of Ordnance, January 10, 1919.

<sup>47</sup> Letter C. O. Sandy Hook Proving Grounds to Ordnance Office, December 13, 1917.

<sup>48</sup> Report C. O. Rock Island Arsenal, March 1, 1918.

<sup>49</sup> Cable Pershing to Bliss, No. 9, November 28, 1917.

<sup>50</sup> Letter Hillman to Chief of Ordnance, April 6, 1917.

<sup>51</sup> Pershing to A. G. O. Cable No. 2472, July 19, 1918.

<sup>52</sup> The model 1905 3-inch field gun was slightly superior to the model 1905 but belonged to the same general class. It was distinctly inferior to the model 1916 gun.

<sup>53</sup> Report of Col. A. A. Fleming, School of Fire, Fort Sill, Okla., to A. G. O., March 15, 1918.

We can do anything with the 3-inch gun on our latest carriage that French officers can do with the 75mm . . .

We were at first informed that the 3-inch gun was inferior in accuracy . . . but it has dawned upon us that this is not true. Our experience indicates that the dispersion of the two guns is about the same at short and mid-ranges; that from 4000 yards up that of the 3-inch is less.

On the mechanical side we have had the same experience . . . The French gun is more complicated in design and less sturdy in construction. Specialized experts are needed to make even small repairs . . . The French carriage is not likely to stand up as well as ours in heavy cross country work . . . certainly not to such demands as we are in the habit of making upon our matériel.

Our sighting system, shields, and draft arrangements are distinctly superior to the French (except perhaps the French independent line of sight) . . . Firing problems that are simplicity itself for the American gun are very difficult for the French.

Unless arrangements have gone so far that very serious delay would result the school recommends most decidedly that the American gun and not the French be adopted as standard.

By the time this rather astonishing report reached Washington, the decision to manufacture the Puteaux model gun had already been made.

With the decision to produce the 75mm field gun Puteaux model 1897 in the United States on an interchangeable basis with the French further difficulties in this process were revealed. The screw threads on the gun carriage were not described on the French drawings and when examined on a French model were found to be of six different types and unknown to American ordnance officials. Information requested from France reached the wrong agency in the Ordnance Department and was "lost" in the files until April 5, 1918. When thread gauges arrived from France they did not correspond with the information in the French reply.<sup>54</sup> American threads were finally adopted after the principal tap and die manufacturers in the United States estimated that six months would be required to duplicate the French threads.

Until August 1918 it appeared that the problem of screw threads would be the limiting factor in the production of the model 1897 field gun, but the difficulties encountered in the manufacture of the Puteaux recuperator dwarfed these. The mechanism of the French hydro-pneumatic recoil system was often erroneously described as "an important military secret." Actually there was nothing secret about it. The Germans had captured hundreds of 75mm field guns, and had not only examined them carefully, but by a relatively simple change had greatly increased the range of the captured guns by raising the elevation.<sup>55</sup> They were thus able to outrange the French with their own weapons.

The only secret about the French recoil system was the difficulty of its construction. It had never been manufactured outside of France. The viscosity of the oil to be used in the mechanism had to be tested by an instrument known

<sup>54</sup> Memorandum Captain W. C. Hedgecock to Col. Rice, "75mm. Gun Carriage Screw Threads," August 8, 1918.

<sup>55</sup> History of the 75mm. Field Gun M. 1897. Army Ordnance Confidential Publication No. 1862, p. 35.

as the "Barbey Ixometer" unknown in the United States. When the first recuperator produced in the United States was filled with oil taken from the French model, the packings and gaskets showed immediate deterioration.<sup>56</sup> The proper oil and grease was discovered just after the armistice, but even then the recuperators failed to function properly. They all returned to battery with a pronounced shock after the gun was fired. This was found to be due to the oil gauge rod which was longer in the actual French model than it was in the drawings.<sup>57</sup> When this final error was corrected the American-made brakes functioned perfectly.

It must be regarded as somewhat ironical that as the war went on, the model 1916 field gun carriage which was abandoned as our principal light artillery mount, should meet with increasing favor while the model 1897 mount was being described as obsolete. At a conference on ordnance problems in Paris on July 7, 1918, Colonel Remaillo, one of the greatest ordnance designers in France, described it as a "very good carriage". French officers at this conference agreed that the model 1897 carriage was out of date and did not meet the requirements of the battlefield.<sup>58</sup> General Pershing then re-entered the lists with a recommendation of French officials that the United States cease making the Puteaux brake and undertake the manufacture of the St. Chamond recuperator which he had previously condemned.<sup>59</sup> This was too much for the harried ordnance officials in the United States. They properly replied that there had been changes enough. For better or for worse the War Department was forced to carry on with its major light artillery program. It succeeded in producing at the end of November 1918, one successful model of a field gun which French officers already regarded as obsolete.

It will be observed that the principal attention has been given in this paper to the American experience with the French 75mm matériel. It was by far the largest part of the artillery program. The difficulties encountered in this part of the program were substantially the same as those met with in the other calibers.

The rather depressing results of the attempt to reproduce French 75mm high explosive shells in the United States were due to two primary causes. One was the vastly exaggerated estimate of the number of shells required. The other was the lack of balance maintained in the manufacturing problem.

The theoretical requirements of the American Army to September 1, 1918, for the 75mm high explosive shell were set at 20,000,000 rounds. In retrospect this contrasts somewhat oddly with the 4,225,501 rounds actually expended and wasted by the A.E.F. to November 11, 1918.<sup>60</sup> It is the part of wisdom to

<sup>56</sup> Captain W. C. Hedgecock, "The Manufacture of the Recoil Mechanism for the 75mm. Field Gun Carriage Model 1897," p. 8. MS in Ordnance Technical Library.

<sup>57</sup> *Ibid.*, p. 7.

<sup>58</sup> Digest of a conference between M. Louche, Minister of Armaments and his assistants and Brig.-General C. B. Wheeler and his assistants, Paris, July 7, 1918.

<sup>59</sup> Pershing to A. G. O. Cable No. 1472, July 29, 1918.

err on the side of liberality in the estimates of requirements, but an error of such proportions is another matter. These huge requirements made a smaller successful program of shell production impossible, because a great deal of time was spent in preparing for a program which never was actually required. The estimation of the probable duration of a conflict is one of the functions of a general staff.

The failure of the Ordnance Department to balance the production of booster assemblies with other components of the 75mm high explosive shell limited the production of completed rounds on November 11, 1918, to 4,112,000.<sup>61</sup> It will be observed that the production of completed rounds in the United States almost equalled the number of rounds expended in France. Thirty-eight per cent of these shells reached France and one-tenth of one per cent were expended.<sup>62</sup>

With reoccurring irony it must be pointed out that while high explosive shell was relatively easy to manufacture and simple in design, and in great demand for trench warfare, it was produced more slowly in the United States than shrapnel which was complicated in design and for which less demand existed. The American Army, it will be remembered, retained its own shrapnel design. Working with our own equipment on designs with which we were familiar, production became embarrassingly great. Estimated production was exceeded—a most unusual case in the ordnance program. Over 7,000,000 rounds of 75 mm shrapnel were completed by November 14, 1918, nearly 4,000,000 rounds arrived in France before the armistice, but not a single round was expended in combat.<sup>63</sup> In spite of the adoption of French calibers the United States produced a total of 18,294,000 rounds of artillery ammunition of all types up to the time of the armistice.<sup>64</sup> This was more than twice the total expenditure of all types in France.

The real check upon ordnance production imposed by the adoption of French types appears in the gun and howitzer program. A comparison of the completed units of both the American and French models on November 15, 1918, follows:

<sup>61</sup> "Report on Ammunition Expended and Wasted by the A. E. F. to November 11, 1918." General Staff, Statistical Branch Files. The term wasted applies to ammunition not expended in combat. General Pershing had set the requirements of the American army in France at 50 rounds of 75mm. H. E. shells per day. Pershing to A. G. O. Cable No. 507. Actual expenditure was 18 H. E.; 5.6 shrapnel per gun per day.

<sup>62</sup> Statistical Summary Series Report No. 5, U. S. General Staff. "The Production of 75mm. H. E. shell." This very long and extremely able survey of the American experience in attempting to manufacture 75mm. ammunition in the United States was prepared by Col. Leonard P. Ayres while he was chief of the statistics branch of the staff.

<sup>63</sup> Cf. "Testimony of Col. A. J. Stuart before the House Committee, July 17, 1919." Hearings Before Sub-Committee No. 5 (Ordnance) of the Select Committee to Investigate Expenditures in the War Department, 66th Congress, 2d Session, Serial 6, Vol. I, pp. 31, 439; General Staff Statistical Report No. 66, p. 3; "Report on Ammunition Expenditure . . .," p. 17.

<sup>64</sup> General Staff Special Statistical Report No. 208, p. 4.

<i>American models</i>		<i>French models</i>	
75-mm field gun Model 1916	206	75-mm field gun Model 1897	0
75-mm field gun Model 1917	724	155-mm howitzer	144
4.7-inch field gun	163	155-mm G. P. F. gun	1
8-inch howitzer	173	240-mm howitzer	1

In round numbers the production of the principal American or British artillery types to mid-November 1918 amounted to 1,200 units, while the equivalent production of French types amounted to 146.

Against the apparent overwhelming disappointments from the artillery production point of view which resulted from the adoption of French types, must be set the very real advantages which resulted from the equipment of American combat forces with artillery in France. For a considerable period of training and a briefer period of combat, the A.E.F. was adequately equipped with matériel uniform to that of the French. These advantages would have been progressively apparent had the war continued for a longer period on the scale of intensity of the last three months. Whether these immediate advantages from the combat point of view outweighed the disadvantages of relegating our own matériel to the classification of training weapons is controversial. The ideal arrangement, of course, would have been to train all our artillery troops with the weapons they were to serve in combat.

Regardless of the conclusions one may arrive at concerning the questions raised above, it seems clear that the adoption of French models in 1917 was destined to exert a permanent effect on American artillery practices. We are still using metric delineations for our light artillery types, and efforts to modernize war-time equipment will probably cause a lengthy survival of these types in our service. The obvious lesson to be drawn from this experience is that the United States should never allow itself to be forced into another major war without having determined in advance by tests and experimentation just what its standard artillery types shall be.

<sup>a</sup> *Ibid.*, p. 3. The 75-mm. field gun Model 1917 and the 8-inch howitzer were of British design but were familiar to American manufacturers.

# PROFESSIONAL NEWS

The INSTITUTE will hold a joint session with the American Historical Association at the association's annual meeting in Washington, D. C., next December. The Program Committee of the Association has designated the main session Thursday morning, December 28, for the Institute's program. Three papers will be read, and it is hoped also to arrange for some leadership of the discussion. The program will be announced in detail in a later issue of the JOURNAL.

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The Department of History of The George Washington University has announced that Brigadier General Oliver L. Spaulding will offer a seminar course during the academic year 1939-40 on the military history of the United States. The seminar, which will meet each Tuesday evening from 8 to 10, is designed to cover the background, development, relations to the civil government, and larger implications of the American military system.

Three hours of credit will be given for each semester, but both must be taken to receive credit for either. The University has stated that, while the enrollment will be restricted in numbers, it will not be confined to its regular student body. Persons with a good background in history and with a real interest in the subject may be permitted to enter their names. Applications should be made to the Executive Officer, Department of History, The George Washington University.

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The general topic of discussion at the Ninth Annual Conference of the Social Science Research Conference, held at Asilomar, California, from April 6 to 8 of this year, was "War in Modern Culture." Groups and leaders participated in a series of round-table discussions of the following sub-topics:

1. War as an expression of the function of nationalism, with special consideration of war as an instrument of national policy. Group leader: F. L. Paxson.
2. The function of war as a release of psychic phenomena. Group leader: E. D. Martin.

3. The effect of the development of modern civilization on the pattern of war. Group leader: J. M. Scammell, vice D. P. Barrows.

4. The influence of economic preparation for war. Group leader: B. F. Haley.

5. War, food, and population. Group leader: C. L. Alsberg.

The INSTITUTE has in its files copies of the minutes of Group Three in which, among others, the following men participated: Professors Dunlap (psychology), U. C. L. A.; Topping (sociology), University of British Columbia; Penrose (economics) and Guichard (political science), University of California; Cressman (anthropology), University of Oregon; Story (political science), U. C. L. A.; Lt. Col. John E. McMahon, Jr., U. S. A.; and Lt. Col. Scammell.

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Important bodies of records relating to the national defense and wartime history of the United States have recently come into The National Archives. Outstanding are records from The Adjutant General's Office, which include additional records of the Secretary of War to 1913; correspondence of The Adjutant General's Office proper to 1861; records of the Signal Corps, 1860-1901; and records of the Confederate States, 1861-65. The last-mentioned group includes military records and records of Congress and of the War, Treasury, and Post Office Departments that were seized at the close of the Civil War. From the Navy Department have been received records of the Bureau of Construction and Repair, including many ship tracings, 1830-1925; of the Naval Districts Division, relating to wartime use and subsequent disposal of private vessels, 1917-37; and of the Naval Aircraft Factory at Philadelphia, 1918-35. The Treasury Department has transferred records of the Southern Claims Commission, 1871-80, and of the Inter-Allied Purchasing Commission, 1917-19. Other records of World War interest recently received include files of the First Production Board, 1917-19; of the War Transactions Section of the Justice Department, 1917-39; and of the Bureau of Mines, 1917-20.

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The Order of Indian Wars of the United States has issued a mimeographed catalogue of material in their files, which are at present in the custody of Robert S. Thomas, Chief Clerk of the Historical Section, Army War College, and housed in the second wing, third floor, Building E, 6th Street and Adams Drive, S. W., Washington, D. C. The catalogue is arranged by name of contributor, by engagements with Indians, publications, Indian tribes, regiments, forts, posts and camps, Indian chiefs, photographs, maps and charts, scouts, Indians, and miscellaneous. This last classification includes: citations, commendations, chronology, courts-martial, diaries, memorials, and outlaws. The collection includes manuscript material, newspaper clippings, and relatively obscure pamphlets.

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The battlefields around Manassas, Fredericksburg, Richmond, and Appomattox Court House are all represented by Civil Wartime and modern photographs in the Virginia Room at the New York World's Fair. The prints are

divided by area into three groups, each of which comprises a volume of twenty-five 8 x 10 photographs.

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Two outstanding acquisitions have been received recently by the Fredericksburg and Spotsylvania National Military Park:

1. As a gift from the National Bank of Fredericksburg: a collection of original papers of the Confederate States navy, being the correspondence and other official papers of Paymaster Ware of the Mobile (Alabama) station.
2. As a loan from the City of Fredericksburg: a collection of nearly two hundred firearms of the Civil War period. This rare and valuable collection was purchased by order of the City Council for placement in the museum of this park from Dr. R. W. Johnson of Fredericksburg.

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A project which has been under way for some time at this park and which should be of considerable interest and assistance to students of the Civil War consists of clearing away the brush and timber necessary to restore historic conditions on the Spotsylvania Court House Battlefield. The land in front of the Bloody Angle and the apex of the Confederate Salient was open at the time of the Spotsylvania operations, May 8-21, 1864, but has since grown up. The clearing will help both serious students and casual visitors to understand more clearly the Federal attacks across open ground against the Confederate line intrenched along the edge of a wood.

Another effort at reconstruction underway is the exact opposite of the clearing. At the junction of the Old Orange Plank and Furnace Roads during the night of May 1, 1863, Lee and Jackson discussed the flank march that Jackson was to make on the morrow. It was their last and most momentous conference. The next day Jackson marched off on the route discussed above and was mortally wounded by his own men in the course of the subsequent flank attack. This conference spot, known locally as the Bivouac Stone, because of a small marker there, was grown up in pines at the time of the conference. The trees were cut down some years after the war. The planting there today will make this important site more nearly approximate its wartime condition. This work is being done by workers of the Civilian Conservation Corps, under the supervision of CCC and National Park Service Technicians.

The basic sources of information for historical projects of this type are official reports, writings of participants, old maps, and war-time photographs. A thirty-two page booklet has been prepared by the staffs of the Fredericksburg, Richmond, and Petersburg National Military Parks describing the work done by the National Park Service and the CCC in the preservation and interpretation of history in the National Park Service Virginia Civil War areas. This booklet soon to be published by the Government Printing Office illustrates the effective

techniques employed in the use of outdoor maps, narrative markers on the ground, and combination narrative and map markers.

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The INSTITUTE's contest on historical firearms is well under way. For those who have not heard of this contest the following will be of interest. Three prizes of \$100, \$50, and \$25 will be offered for the most adequately substantiated replies to a questionnaire on the physical, functional, and tactical characteristics of a series of about twelve models of infantry shoulder arms. Each of the weapons has been selected as being the most typical of its period.

The contest is open to anyone except officers of the society and there are no entrance fees or other expenses. It will be judged by a committee consisting of Brig. Gen. Oliver L. Spaulding, U. S. A. Retired; Lieutenant Colonel Calvin Goddard (Ord. Res.), nationally known authority on ballistics and historical arms; and Mr. John K. Scofield of the staff of the *American Rifleman*, an expert on the firearms of the sixteenth to eighteenth centuries. All who consider competing should write at once to the Secretary.

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The American Military Institute lost one of its charter members and a loyal supporter in the death of William Carey Brown, Brigadier General, U. S. A., Retired, at his home in Denver, Colorado, on May 8, 1939. Students of military history, particularly those of the Indian Wars of the West, will greatly miss this kindly author and collector who gave so generously and unselfishly of his time and efforts to any who appealed to him with a serious purpose.

General Brown, born December 19, 1854, at Traverse des Sioux, Minnesota, was graduated from the United States Military Academy in 1877, in time to participate in the Bannock, Sheepeater, and Sioux Indian campaigns, 1878-1891. Although he remained in service until after the World War, being at one time the oldest officer in the A. E. F., and had other campaigns and accomplishments to his credit, it was the earlier phase of his career which interested him historically and occupied his time since his retirement, December 20, 1918. He will be remembered particularly for his study of the Sheepeater Campaign of 1879 and for the valuable documents on Indian War history he gave to the Army War College and other institutions.

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# THE MILITARY LIBRARY

*Lee, Grant and Sherman: A Study in Leadership in the 1864-65 Campaign*, by Alfred H. Burne. (New York: Charles Scribner's Sons. 1939. Pp. 207. \$3.00.)

Here is a book which, in general function, is good, but in detail is very bad. Its purpose is a useful one: strategical analysis of the chief campaigns fought by the three outstanding generals of the Civil War in the United States. Colonel Burne serves this purpose with fine professional knowledge and objectivity. He employs a clinical method and, in each case, renders an interesting and intelligent decision on strategy practiced—interesting and intelligent whether or not one always agrees with the conclusions.

In treating the Lee-Grant campaign, he follows the conventional lines, with some minor divergences. He gets involved perhaps unduly in the usual debate as to what Grant's objective was. He is convinced that it was Lee's Army, minimizes Richmond, and tends to ignore the inevitable duality of objective.

Speaking of the author's minor divergences from the conventional treatment, Grant is accredited with a clever stroke in routing Smith's XVIII Corps the long way to the Cold Harbor field: a new interpretation quite contrary to the established belief that error produced it, and presented without citation of authority (lack of documentation is a weakness of the book).

Lee, throughout, is treated with the favorable judgments which are his due. Grant, at the same time, is given judicious credit without the least detraction from his great antagonist. Withal, this reviewer feels that Colonel Burne is a bit unkind to Grant in arguing that he had no unified plan or objective during the Petersburg operation, and in criticising what he calls the open left flank throughout that period. Events certainly declare that he served successfully at least three of the four objectives which the author lists as unserved. As for the open flank and the failure to maneuver, an excellent reason for that might be spelled "Mahone," or stated as Lee's mastery of counter maneuver on interior lines. Moreover, one suspects the author is not aware of how deeply refused and fortified this so-called open flank was.

In presenting what seems to be the first adequate treatment of Early's Shenandoah Valley Campaign, this book presents an arresting study of the Sheridan-Grant relationship.

Sherman's service of geographical and time objectives rather than enemy army objectives is brought into clear relief, with some damage to the "war hellian's" fame. Sherman's lost opportunities and undaring character have been pointed out by historians, but not before has an unbiased recorder brought together the numerous threads and made of them a critical fabric, whole and sound.

The author shows a pertinacious tendency toward minor errors of fact and spelling, and no little misunderstanding of terrain and tactical developments of these campaigns. The book is representative of the bulk of Civil War historical works of recent years, in that it contains unnecessary errors—errors which might have been avoided by some careful study of the ground and consultation with good students. Military and civilian authors alike are guilty. The military men show a reluctance to do the painstaking drudgery of research that sound historical writing exacts; and the academics neglect applying to their military historical work the tested professional research methods they employ in the writing of general history.

Colonel Burne's work has value as a one-volume study and appraisal of the strategy of three important generals.

BRANCH SPALDING

*Fredericksburg, Virginia*

*The Rise of American Naval Power, 1776-1918*, by Harold and Margaret Sprout.  
(Princeton: Princeton University Press. 1939. Pp. 398. \$3.75.)

This book fills an important gap in a long neglected phase of American naval history. It connects up naval policy with national policy and with external national interests, political and economic. The work is based on thorough-going research. It is scholarly and broad-gauged and presents facts and logical deductions from them in a narrative to 1918 that is very interestingly told.

Our early naval policies are shown to have been most unstable; governed principally by expediency and shaped by transitory conditions frequently of minor importance. The result was usually a woefully neglected navy or one of mushroom growth. Suffering under post-war reactions, the navy in peace-time was allowed wastefully to deteriorate in material and personnel, with little regard for the future. The consequence was serious unpreparedness when the next war came.

Only with the advent of the writings of Admiral Mahan did the navy clearly emerge in the vision of our political leaders after 1890 as an instrument of peace diplomacy and general economic welfare as well as of war-time security. Mahan's epoch-making books on sea power received early acclaim in Europe. Their profundity was but slowly recognized in America, even by naval officers.

Among the early converts to Mahan's doctrines were Secretary of the Navy Tracey, during the early revival of our naval power, and Theodore Roosevelt, subsequently Assistant Secretary of the Navy. The latter was most active in naval preparedness previous to the Spanish-American War and afterwards as

President. Through gruelling experience with our neutrality before we entered the World War, President Wilson was converted from a position of declared hostility to one of full endorsement of naval preparedness.

The book is of especial value and interest at this time when naval and national policies are coming to be regarded more and more as closely related. The problem of the respective functions of naval officers and civilian officials in formulating sound and politically acceptable naval policies is one that still remains for solution in this country. Formerly the default of civilian officials in this respect often placed an undue responsibility upon naval officers. The former are fortunately becoming more conscious of their essential part. By presenting a study of this phase of our history, the book should aid them and the public in properly correlating naval policy with war experience and with the trend of foreign relations in peace as well as war. The authors have thus done a national service.

The difficult task of interpreting semi-technical material dealing with naval policy and operations is better done than in most naval histories written by civilians. The book shows every evidence of careful study and analysis in this aspect of naval affairs which in principle is largely a matter for civilians.

CAPTAIN DUDLEY W. KNOX, U. S. N.

*Naval Records and Library, Washington, D. C.*

*Soldiers of the Overland; Being Some Account of the Services of General Patrick Edward Connor and His Volunteers in the Old West*, by Fred B. Rogers, Major, Infantry, U. S. A. (San Francisco: The Grabhorn Press. 1938. Pp. 290. \$7.50.)

The Powder River expedition of General Connor in 1865 has received very little attention and the most extensive accounts of it are quite obscure. It is unusual in that it was one of a very few Indian expeditions in which volunteer troops were used exclusively. It is the center of interest of the present volume, which is extended to become almost a biography of General Connor.

If Major Rogers' book is a shade under professorial standards of historiography, the author has kept on the safe side by quoting sources extensively, in many cases giving complete texts, and his search for material has been assiduous and thorough. Much material is found in the *Official Records of the War of the Rebellion*, but early newspapers of Utah and California, numerous obscure local histories, and some original documents have been consulted. The extensive use of quotations occasionally leaves something to be desired in the way of synthesis, compensated in part by enlightening critiques of the military operations.

Connor's first duty was the protection of the Overland Trail, for which purpose he marched from California to Salt Lake City and established Camp Douglas. Relations with the Mormons were still strained as a result of the "Mormon War" and Connor's troops were the first to enter the Utah capital.

Among features of garrison life at this period were the establishment of a newspaper to represent non-Mormon opinion and the official encouragement of prospecting and mining as a profitable diversion for off-duty hours. The most notable fight with the Indians took place on Bear River January 29, 1863.

Besides General Connor's expedition in 1865, other columns were led by Colonel Nelson Cole and Lieutenant Colonel Samuel Walker. Failure of the Cole-Walker columns to unite with Connor and of all three to gain contact with the expedition of General Alfred Sully resulted in a less successful campaign than had been planned, although Connor's Powder River battle discouraged the Indians to some degree.

A most admirable piece of book-making has been produced by the publishers, in an edition limited to one thousand copies. It has been chosen one of the fifty books of the year by the American Institute of Graphic Arts. The illustrations are numerous and excellently reproduced, and their sources are given. Two folding maps revised from the W. J. Keeler map of 1867 have a value beyond the immediate purpose of accompanying the text. There is a plan and several photographs of Camp Douglas.

DON RUSSELL

*Chicago, Illinois*

*The Faithful Mohawks*, by John Wolfe Lydekker, with a foreword by Lord Tweedsmuir (Cambridge: at The University Press; New York: The Macmillan Company. 1938. Pp. 206. \$3.75).

*McGillivray of the Creeks*, by John Walton Caughey. (Norman: The University of Oklahoma Press. 1938. Pp. 385. \$3.50).

*Winning Oregon: A Study of an Expansionist Movement*, by Melvin Clay Jacobs. (Caldwell, Idaho: The Caxton Printers, Ltd. 1938. Pp. 261. \$3.00).

*Southern Plainsmen*, by Carl Coke Rister. (Norman: The University of Oklahoma Press. 1938. Pp. 289. \$3.00).

In the first of the works listed above the role of the Society for the Propagation of the Gospel in maintaining the allegiance of the Iroquois, particularly the Mohawks to British interests throughout the French and Indian Wars and the American Revolution is described. Considering the sporadic character of its missionary efforts, the society attained unusual success. Its archives contain much unexploited material on this period. Among the activities of others, the work of Joseph Brant (Thayendanegea) is described. Some of the missionaries acted as chaplains in various military expeditions and some were persecuted as Tories. Their reports and letters offer a valuable sidelight on Indian affairs from 1664-1807, and serve as a much-needed corrective to the traditional American point of view. Unfortunately Mr. Lydekker seems only casually acquainted with the background of the period and the characters with which he deals. He exhibits surprising naïvité in presenting one of Brant's letters written while in England

to the Secretary of State for the Colonies as "showing the excellent command of the English language which the Chief had attained."

While there is little doubt about Brant's abilities in the field of war and diplomacy, the achievements of Alexander McGillivray far surpassed those of any other member of an Indian tribe. It is true that McGillivray was but one-fourth Indian, and that he had the benefit of formal, white schooling, but he chose to cast his lot with the Creek Nation and in the decade from 1783 to 1793 actually succeeded in making it a nation. With a diplomatic finesse worthy of a Talleyrand or a Metternich, he took advantage of the boundary dispute to balance Spain against the United States and to win recognition from both for the Indians. When he resorted to war against Georgia and against the "State of Franklin" he did so with a moderation probably never elsewhere equalled among the Red Men. But actual command in the field he avoided, as he had no fitness for it. Mr. Caughey's work is something in the nature of a source book, as 302 of its 385 pages consist of reproductions of letters from, to, and about McGillivray located in the Archives of the Indies at Seville, Spain. An excellent 55 page sketch of the Indian leader precedes the documents. Mr. Caughey's scholarship is so thorough that one is amazed to find so curious a flaw as a confusion between Nathan Hale and E. E. Hale in footnote 151, page 199.

Oregon is the only part of the United States not acquired either in war or by purchase. Dr. Jacob's monograph makes a scholarly approach to the subject and joins in rejecting the much-exploited Whitman legend. Although this theme is not new, *Winning Oregon* tells the entire story in brief and convenient form, and performs a service in emphasizing the importance of the Monroe Doctrine in the controversy, and in paying tribute to Senator Lewis F. Linn of Missouri. The policy of President James K. Polk is given sympathetic interpretation. Military phases of the situation are given little attention, considering how narrowly war was averted.

In an excellent survey of ways of life on the Southern Plains, Dr. Rister has included two interesting chapters on the Indian wars of that area, one relating to the campaigns; the other to captivities and hero tales. The merit of the book is in its summary of the social history of one of the last frontiers. On page 99 President Johnson not President Jackson is intended. Otherwise the book seems quite free from errors and slips in proof-reading. The four books reviewed above comprise a welcome addition to the growing library on Indian affairs.

DON RUSSELL

*Chicago, Illinois*

#### *OTHER RECENT BOOKS*

##### *i. United States and Great Britain*

*The Royal Engineers in Egypt and the Sudan*, by Lieutenant-Colonel E. W. C. Sandes. With a foreword by Sir Reginald Wingate. (London: Institution of Royal Engineers. 1937. Pp. 571.) An assertion that Egypt's present prosperity is due in large measure to the resolution and skill shown in her service

by the officers of the Royal Engineers, prominent among whom were Gordon and Kitchener. The book contains well mapped accounts of various campaigns in the late 1880's and 1890's, Kitchener's advance to Khartum in 1898, the defense of Egypt, 1914-1918, as well as data on the post-war mutinies and rebellions. The latter portion of the book deals with the work done by, or with the cooperation of, the Royal Engineers, in sanitation, communications, construction, and administration.

*From Versailles to Munich*, by Bernadotte E. Schmitt. (Chicago: The University of Chicago Press. 1938. Pp. 57. \$1.00.) Public Policy Pamphlet No. 28. The views of a distinguished American historian on the breakdown of the Versailles system.

*Infantry in Battle*. (Washington: Infantry Journal Inc. 1939. Second Edition. Pp. 422. \$3.00.) This volume was prepared by the Military History and Publications Section of the Infantry School under the skilled editorial supervision of Captain C. T. Lanham. Treating the tactics of small units, this work checks the ideas of peacetime instruction against the experience of war. The examples of combat situations are well chosen; the organization of the volume is excellent. Widely regarded in foreign countries as one of the most valuable products of our service schools, this volume has been translated into many languages.

*War on Great Cities*, by Frank Morison. Illustrated with 64 photographic reproductions and 12 diagrams and maps. (London: Faber and Faber. 1937.) This book, addressed to the lay public, describes the numerous Zeppelin and air-raids on London from 1915 to 1918, with accompanying photographs of resulting damage. It discusses the air-warfare of the future in the light of technical advances since the World War.

*Wallenstein: Soldier under Saturn*, by Francis Watson. (New York: D. Appleton-Century Company. 1938. Pp. 439. \$4.00.) The first life of Wallenstein in English since 1837. Based on careful study of the archives at Vienna and Prague.

*Colonial Blockade and Neutral Rights, 1739-1763*, by Richard Pares. (New York: Oxford University Press. 1938. Pp. 323. \$7.00.) An enlightening account of the conditions of maritime warfare in the 18th Century. Supplements the same author's *War and Trade in the West Indies, 1739-1763*.

*America and the Strife of Europe*, by J. Fred Rippy. (Chicago: The University of Chicago Press. 1938. Pp. 264. \$2.00.) A brief survey of American policies regarding European conflicts from 1776-1938.

*Through the Fog of War*, by B. H. Liddell Hart. (New York: Random House. 1938. Pp. 379. \$2.50.) More reputations of World War leaders twenty years after by the well-known British military critic.

*The Thirty Years War*, by C. V. Wedgwood. (New Haven: Yale University Press. 1939. Pp. 545. \$4.50.) A well documented study.

*Our Maginot Line*, by Livingston Hartley. (New York: Carrick & Evans, Inc. 1939. Pp. 305. \$2.75.) A study in the defense of the Americas by one who sees little prospect of checking totalitarian expansion save by maintaining the Atlantic barrier.

## 2. Western Europe

*La Troisième Bataille des Flandres: le Kemmel*, by General Jean Joseph Rouquerol. (Paris: Payot. 1936. Pp. 216.) This volume in the *Collection de Mémoires, Etudes et Documents pour Servir à l'Histoire de la Guerre Mondiale* is a study of the German offensive of the month of April 1918, terminating at the battle of Mount Kemmel, which the author describes as a formidable duel between the two masters of warfare, Foch and Ludendorff.

*Le général Smigly-Rydź, commandant en chef de l'armée polonaise*, by Joseph André Teslar. (Paris: Société française d'éditions littéraires et techniques. 1936. Pp. 87.) Biography of the great Polish military leader, the favorite pupil of Marshal Pilsudski, and his successor to the Supreme Command of the Polish army. Written by a Polish army officer.

*Als Politischer General im Osten (Finnland und Baltikum) 1918 und 1919*, by Rüdiger Graf von der Goltz. (Leipzig: Verlag von K. F. Koehler, 1936. Pp. 173.) Politico-military memoirs of General von der Goltz who commanded the German expeditionary forces sent to Finland in 1918 and the German troops in the Baltic provinces in 1919. The work appeared originally in 1920 under the title: *Meine Sendung in Finnland und in Baltikum* (My Mission in Finland and the Baltic Provinces). The present edition, according to the author, has been greatly revised. It contains much which he would hardly have dared write in 1920, when German territory was still occupied by Allied forces.

*Bibliographie zur Militärischen Geschichte Frankreichs im Weltkrieg*. (Stuttgart: Weltkriegsbücherei. 1937. Pp. 93.) This bibliography on the military history of France in the World War appears as the *Bibliographische Vierteljahrsshefte der Weltkriegsbücherei* (Bibliographical Quarterly of the World War Library [Stuttgart]) for October 1937. It comprises a catalog of the library's resources on the subject.

*L'Italia nella Guerra Mondiale*, by Mario Caracciolo. (Rome: Edizioni Roma. 1937.) A study of the role of Italy in the World War, with the author's presentation of the advantages which Italy's entrance into the war brought to the Allies. He maintains that: (1) in 1915 Germany and Austria were prevented from completing their campaigns against Russia because of their fear of Italy's entry; and that (2) in 1916 the Italian offensive aided the

French at Verdun. The work also describes the operations of Italian troops in Albania, Palestine, and Serbia, as well as on the European fronts.

*Infanterie greift an*, by Lieutenant-Colonel Rommel. (Potsdam: Voggenreiter. 1937.) A military history of the World War studied from the view-point of the small infantry unit, based on the author's experiences as a commander of a company and covering his experiences in northern France from 1914 until January 1918, when he became a member of the German General Staff. The work describes each engagement in detail, and illustrates each with charts and diagrams.

*Mit den Türken zum Suezkanal*, by Frederick Kress von Kressenstein. (Berlin: Vorhut-Verlag. 1938. Pp. 308. Rm. 7.50.) The memoirs of a brilliant German staff officer in the service of Turkey during the World War.

### 3. Central and South America

*Conflictos diplomáticos y militares en el Río de la Plata, 1842-1845*, by Tte. Cnel. Ramírez Juárez. (Buenos Aires. 1938. Pp. 198.) Study, based largely on unpublished documents, of the conflicts under Juan Manuel de Rosas which led to the British-French blockade of Buenos Aires.

*Las guerras de Bolívar*. Volume III: *La Patria Venezolana, 1817-1819*, by Francisco Rivas Vicuña. (Bogota, Columbia: Imprenta Nacional. 1938. Pp. 321.) Modern, scholarly military history of the "Liberator," this volume covering the encounter with Morillo through the battle of Boyacá. Vol. I was published in 1934, Vol. II in 1936.

*Las Invasiones Inglesas del Río de la Plata, 1806-1807, y la Influencia Inglesa en la Independencia y Organización de las Provincias del Río de la Plata*, by Carlos Roberts. (Buenos Aires. 1938. Pp. 458.) Account of the defense of Buenos Aires against the British attacks under Beresford and Whitelock.

*La conquista criolla, Jornadas del Litoral*, by Agustín Zapata Gollan. (Santa Fe, Argentina. 1938. Pp. 166.) Campaigns in the Río de la Plata in the sixteenth century.

*Numismática colombiana; medallas y condecoraciones*, (2d ed.), by Eduardo Posada. (Bogotá, Columbia: Imprenta Nacional. 1938. Pp. 185.) Covers military decorations of Columbia.

*El hombre y sus armas. Memorias de Pancho Villa*, by Martin Luis Guzman. (México: Ediciones Botas, Imp. "Manuel León Sánchez," S.C.L. 1938. Pp. 328.)

### 4. Eastern Europe and Asia

*Na Kaspijskom more* [In the Caspian Sea], by N. Lishin, (Prague, 1938). The author served on the flagship of the British squadron amidst the battles and political life in the Caspian Sea in 1918 and 1919. The events described

show how the English as allies of Russians rendered "help" (depending on their commercial or political interests) to the White armies. British policy towards Russia was expressed clearly in the Caspian Sea.

*Mirovaja vojna na Kavkazskom fronte 1914-1917 g.; strategicheskij ocherk* [The World War on the Caucasian front 1914-1917; strategic sketch], by E. V. Maslovskii. (Paris. 1933. Pp. 503.) A valuable contribution to the history of the World War. Events on the Caucasian front are little known even to specialists, although it was rich in military lessons. General Maslovskii speaks highly of the audacity of the Turkish plans and the high qualities of the Turkish soldier. The supreme command was in hands of Germans who never utilized the best that was in the Turkish army, another proof that military doctrine must be based on national principles.

*Rokovye gody (novyia pokazaniia uchastnika)* [The fatal years (the new testimony of the witness)], by B. Nikitin. (Paris. 1937. Pp. 270.) For the first time new documents relating to the events in Russia in 1917-1918 are being published in full. They include material on German participation in the Russian Revolution of 1917; the fate of Grand Duke Mikhail (brother of the late Tsar Nicholas II); Lenin's role in the October revolution of 1917 (which is presented in an entirely new light); the war with Turkey at the end of 1918 after the armistice. The author was at the head of the intelligence service in Petrograd.

*Orenburgskoe kazach'e voisko v bor'bie s bol'shevikami, 1917-1920* [Orenburg Cossack in the war with the Bolsheviks], by I. G. Akulinin. (Shanghai: Slovo. 1937.) General Akulinin, a commander of the Orenburg Cossack troops during the civil war in Russia, authoritatively describes the war with the Reds. An unbiased presentation of the facts.

*Lodzinskaia operatsiia na russkom fronte Mirovoi voyny v 1914 g.* [Lodz operations on the Russian front in the World War in 1914], by D. Rybin. (Moscow. 1938. Pp. 46.) On the basis of published documents and German sources, the author has compiled a brief description of one of the most outstanding tactical operations on the Russian front, the deep penetration and envelopment of the maneuver period of the World War.

*Poluvekovna voenna B'lgaria* [50 years of the military history of Bulgaria], S"iuza na druzhestvata "Invalid," Sofia. (Sofia. 1932. Pp. 111.)

*Dielistvija 12-i Kavaleriiskoi divizii v period komandovaniia eiu Sivity Ego Velichestva General-Maiora Mannerheim* [Operations of the 12th Cavalry Division during the command of General Mannerheim], by E. G. von Val'. (Tallin. 1936.) General Baron Mannerheim, now a Field Marshal of the Finnish army, was during the World War commander of the 12th Russian Cavalry Division. An interesting history of the operations in Galicia, Volynia and Rumania.

## RECENT PERIODICAL LITERATURE

### MILITARY HISTORY

"Objectives and Policies of Historical Conservation," by Ronald F. Lee, in *The Regional Review* [National Park Service, Region One], March 1939, pp. 3-8. Brief summary of the scientific, governmental, and social background of the conservation of our historical sites, written from the official point of view.

### MILITARY SCIENCE

- "The Development of the German Defensive Battle in 1917, and Its Influence on British Defence Tactics," by Captain G. C. Wynne, in *The Army Quarterly*, April-July-October 1937 (XXXIV, 15-32, 248-266; XXXV, 14-27).
- "La Genèse de la Marne d'après le Service Historique du Reich. (16 Août-5 Septembre 1914)," by Lt. Col. Malcor, in *Revue Militaire Générale*, October 1937 (II, 464-492). An exposé of how the German general staff explained and judged the conception, the deviations, and the check of its initial maneuver.
- "A l'Etat-major de la IIe Armée Allemande pendant la Bataille de la Marne," by R. Villate, in *Revue d'Histoire de la Guerre Mondiale*, October 1937 (XV, 313-338).
- "Le Système Fortifié Allemand de 1871 à 1918," by Lt. Col. Montigny, in *Revue Militaire Général*, February 1937 (I, 183-220).

### INSTITUTIONS

#### *France*

"L'Education Technique en France au Dix-Huitième Siècle," by F. B. Artz, in *Review d'Histoire Moderne*, September-December 1938, pp. 5-51. Contains an account of the military educational institutions of 18th Century France.

#### *United States*

- "The Attack Upon West Point During the Civil War," by Harry Williams, in *Mississippi Valley Historical Review*, March 1939 (XXV, 491-504). An account of the congressional attack on the military academy which produced so many Confederate officers. Another example of the activities of the Radical group in Congress who saw pro-slavery sentiment in all "West Pointers."
- "Benjamin F. Wade and the Atrocity Propaganda of the Civil War," by Harry Williams, in *Ohio Archaeological and Historical Quarterly*, January 1939 (XLVII, 33-46). An account of the effort of Wade to influence the anti-slavery movement and drum up war spirit by wholesale distribution of reports of alleged Confederate atrocities on Union wounded and dead.
- "If War Breaks Out Tomorrow," by George Fielding Eliot, in *The New Republic*, May 24, 1939, pp. 63-66. Vigorous preview of what may come with detailed statistics on the strength of the possible combatants.
- "Our New Long Shadow," by Hanson W. Baldwin, in *Foreign Affairs*, April 1939 (XVII, 465-76). Discussion of our national defense program, chiefly naval.
- "The American Indian," by Samuel J. Flickinger, in *Proceedings of the Annual Meeting of the Order of Indian Wars of the United States*, held at Washington, D.C., February 28, 1939. A summary of the civil and military relations of the Indians by the Assistant Chief Counsel, Office of Indian Affairs, Department of the Interior.

### ESTABLISHMENTS

#### *Argentina*

"La Creacion de la Segunda Escuadra Patriota (1813-1814)," by Hector Paul Ratto, in *Revista Militar* (Buenos Aires), October 1938 (vol. 71, no. 4). A naval establishment during the struggle for independence in Argentina.

#### *France*

- "The Scottish and English Gendarmes and the Scottish Body-Guard in the Service of France," by Percy White, in *Jour. Soc. Army Historical Research*, Summer 1939 (XVIII, 80-90). Covers uniforms and insignia as well as organization.
- "The Modern Army: An Analysis of General Maurin's Study of the French Forces," by Lt. Col. Donald Armstrong, in *Army Ordnance*, March-April 1939 (XIX, 277-79).

*Germany*

"The Reichswehr Today," by Herbert Rosinski, in *Foreign Affairs*, April 1939 (XVII, 538 ff.).

**OPERATIONS AND BIOGRAPHY**

"John the Painter," by William Bell Clark, in *The Pennsylvania Magazine of History and Biography*, January 1939 (LXIII, 1-23). The tale of the aberrated Scotsman who conceived himself an agent of the Continental Congress and who set out in 1776 to destroy the British navy yards.

*The Daily Oklahoman*, Oklahoma City, Golden Anniversary edition, April 23, 1939, 292 pages in 15 sections, contains numerous historical articles: W. B. Morrison, "Oklahoma's Military Forts," M. E. Tracy, "Under Seven Flags," contributions by Edward Everett Dale, James Truslow Adams, Grant Foreman, Stanley Vestal, Warren C. Price, William Allen White.

"Kit Carson, 'Bayard of the Plains,'" by Allan Nevins, in *The American Scholar*, Summer 1939 (VIII, 333-349). An essay on his character, upholding thesis that he was most representative western hero of period.

"The British Army in the Orange River Colony and Vicinity, 1842-54," by Major G. Tylden, in *Jour. Soc. Army Historical Research*, Summer 1939 (XVIII, 67-77).

*World War*

"Comment l'Armée Rennenkampf pénétra en Prusse Orientale (Août 1914)," by Jean Savant, in *Revue d'Histoire de la Guerre Mondiale*, October 1938 (XVI, 381-99).

"La Conduite de la Guerre: Joffre et l'Année 1915," by Colonel C. Menu, in *Revue Militaire Générale*, November 1937 (II, 550-615).

"En Marge du Chemin des Dames: La Prise des Bastions de Chevreaux (22 Mai 1917)," by Elie Chamard, in *Revue des Deux Mondes*, July 15, 1937 (XL, 433-54).

"Devant Verdun: Dans les Postes d'Ecoute," by Pierre Andrieu, in *Revue des Deux Mondes*, June 15, 1937 (XXXIX, 862-85).

"En Marge de la 'Grande Guerre': Les Italiens en Albanie (1916-1918)," by C. Vidal, in *Revue d'Histoire de la Guerre Mondiale*, October 1938 (XVI, 337-63).

"L'Espagne pendant la Grande Guerre," by Albert Pingaud, in *Revue d'Histoire de la Guerre Mondiale*, July 1938 (XVI, 241-69).

*1919-1939*

"Campagne du Rif, 1925-1926. Officers Espagnoles et Français au Maroc," by General Boichut, in *Revue des Deux Mondes*, September 15, 1937 (XL, 304-35).

"Considerations sur la Campagne Italo-Ethiopienne," by General Ambrogio Bollati, in *Revue Militaire Générale*, February 1937 (I, 205-37).

"Climax in Catalonia," by Captain Wendell G. Johnson, in *Infantry Journal*, March-April 1939 (XLVI, 134-45). Tactical review of the last days of the Spanish Civil War.

"The War in China Continues," by Rodney Gilbert, in *Foreign Affairs*, January 1939 (XVII, 321-35). Summary of chief military movements and estimate of factors involved.

**OBJECTS AND ANTIQUITIES***Weapons*

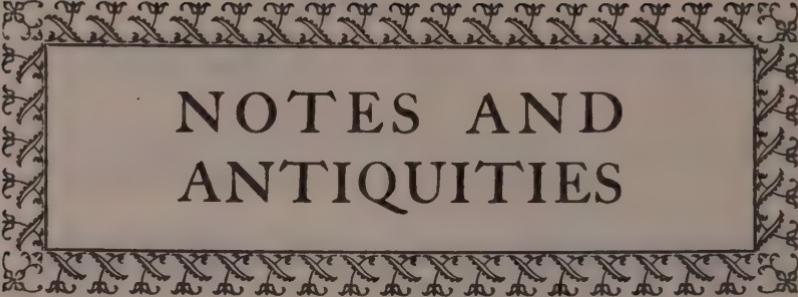
"Rockets," Part I, by Lt. Col. Calvin Goddard, in *Army Ordnance*, March-April 1939 (XIX, 302-04). The start of a series of notes on a long disregarded type of ordnance.

"The Treeby Chain Gun: A Very Early Adaption of the Belt Feed Mechanism," by S. Basil Haw, in *Army Ordnance*, March-April 1939 (XIX, 286-89).

*Graphic Arts*

"Portraits While You Don't Wait," by Voorheis Richeson, in *Recruiting News*, April 1939, pp. 4-5 ff. Account of the experiences and work of Joseph Cummings Chase while official artist of the A. E. F.

"Way Out West," by Elmo Scott Watson, in *Coronet*, April 1939, pp. 147-53. Story of the photographer Stanley J. Morrow who accompanied Crook in 1876 and thereafter travelled widely throughout the West, constantly taking pictures. Morrow died in 1921 and in 1936 the bulk of his collection of prints was presented to the University of South Dakota Museum.



# NOTES AND ANTIQUITIES

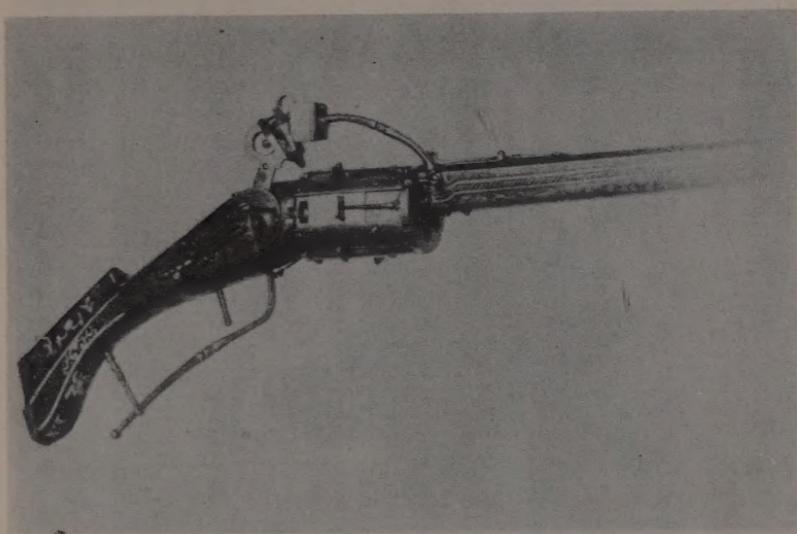
## THE DANISH ROYAL MUSEUM OF ARMS AND ARMOR

*Adjoining the Christiansborg Palace and within a stone's throw of the Bourse, there stands in Copenhagen, the Tøjhøjs, an ancient armory, immense in size and beautiful in its own right. Here is housed one of the world's most famous collections of arms. The JOURNAL is pleased to be able to introduce this collection to American historians through the following article by the Deputy-Keeper, Mr. Hoff.*

The Royal Museum of Arms and Armor actually originated early in the history of Denmark, since its oldest collections comprise the armories of Danish kings dating back to the seventeenth century. Since such collections contained a wide variety of richly decorated and ingeniously constructed weapons, as well as the monarch's personal arms, they formed a valuable foundation. To these royal armories other collections have been added from time to time, as when, in the seventeenth century, the armory of the Oldenburg counts was incorporated and when in 1860 the museum received the armory from Rensburg.

As early as 1790 these royal collections had been placed in the building where they are now domiciled, a beautiful old armory completed in 1604. In 1838 the collections were transformed into an actual museum, an historical collection of arms which received the name it bears at present, *Tøjhøstmuseet*. The purpose of the museum is twofold: first to show the development of the weapons of European civilization from the first use of gunpowder and, second, to illustrate the arms and equipment of the Danish army throughout its history.

In the cathedral-like lower-floor hall of the armory building, the longest vaulted room in Europe, is the ordnance collection. Its 400 cannon evidence the development of artillery from the end of the middle ages up to our own time. Particularly interesting are the Anholt guns, salvaged from a wreck in Danish waters; they are breech-loading pieces of ordnance dating from the fifteenth century, made of iron bars kept together by iron bands, shrunk on like the bands on casks. The guns are mounted rather primitively on heavy oak beams. From



*Top: Cylinder and stock of a revolver carbine made in Nuremberg, 1597.*

*Bottom: Puckle's revolving cannon of 1718.*

*Photographs furnished by the Danish Royal Museum of Arms and Armor.*





*Armor of King Christian IV, founder of the arsenal in Copenhagen. The suit was made by Jacob Gering in 1642.*  
*Photograph furnished by the Danish Royal Museum of Arms and Armor.*

behind was inserted a cylindrical chamber, loaded with ball and powder and wedged in securely. Firing was done through a touch-hole on the upper side of this chamber.

The following centuries are represented by practically all the types of ordnance that have ever been used in western Europe. Among them are many interesting experimental models, that show the fight of inventors against the technical imperfections of their time, which as a rule did not allow the materialization of the products of their fertile brains. A characteristic example of such a working model is Puckle's revolving-cannon of 1718. Besides the one in Copenhagen, only one other exists; it is in the Tower Collection at London.

On the next floor, in the *Vaabensal*, are the personal or hand arms. These are arranged on the same chronological principle of exhibition, showing the development of single types of arms. The collection of small-arms, comprising in all about 2500 exhibits, begins with one of the oldest extant guns: the "Vedelspang" piece, dating from just after 1400, from which were fired bullets of lead or iron (not stone). Other exhibits follow up to the present day machine gun.

For the seventeenth and eighteen centuries there is a great number of richly carved and inlaid fowling pieces, boar pieces and other guns once belonging to the kings. Here we find another confirmation of the old saying that there is nothing new under the sun. Again and again is met the same invention which comes to fruition only when technical progress has caught up with the imagination of its several inventors. Usually, for example, the invention of the revolver is ascribed to the American, Samuel Colt; but, as mentioned above, the principle was incorporated into a gun as early as the beginning of the eighteenth century, and in small arms it was known more than a hundred years earlier. Before 1600 there lived in Nuremberg, Germany, a gun-maker who constructed both guns and pistols on the revolving system. Unfortunately only his mark—a spur—is known. In European collections a few pieces of this master's work still exist; the *Tøjhussmuset* has three specimens, one of which is illustrated above. On the barrel is an arm which holds the striking piece in a frame. The chambers, eight in all, are gathered around a central tube, in which rests the spindle. The cylinder has a small plate attached at each end, the plate nearest the barrel having holes corresponding to the calibre. The chambers are moved round by hand; the top one is held in the proper position for firing by a spring attached to the barrel and which engages small notches on the top of the forward plate. There is a separate flash-pan for each chamber, covered with a sliding lid, retained in position by a spring catch.

Along the walls of the *Vaabensal*, are hung the swords and daggers, whose development is exemplified by about 1400 specimens. Here are all the important types: long, heavy, two-handed swords; elegant iron-cut rapiers of the seventeenth century; slender rococo court-swords, and sabres, old and new.

In the same hall are six or seven hundred old banners, 250 of which were taken from the enemy on the battlefield. In addition, the museum possesses

about 50 complete suits of armor and numerous single parts, a collection of uniforms comprising more than 400 complete outfits from Denmark and other countries, and a considerable collection of military head-gear. Various exhibits from the army medical and service corps, tents, engineering and communications materiel, and the like are not yet on display.

The Royal Museum of Arms and Armor is important not only as a museum but as an institute for the historical study of arms and uniforms. In the pictorial archives, the library, and the files of notes and references are amassed valuable sources for research. Of special significance are the international files of gun-makers and their stamps, founded by Captain J. F. Stöckel, late museum director. These files are the foundation for the dictionary of gun-makers which began to appear in 1938. Closely connected with the Royal Museum is the *Vaabenhistorisisk Selskab*, or the Arms and Armor Society, possibly the largest of its kind in the world. The society publishes an *Aarbog*, or yearbook, with synopses of articles of interest that have appeared in the English, French or German languages.

Arne Hoff

Copenhagen

#### QUERIES

32. REBEL WAR CRY. Exactly what was the Rebel war cry and how did it sound?

P. H. B.

33. GOLD STAR ARMBAND. What was the origin of the use of the gold star armband for mourning which was worn during the World War?

H. D. D.

34. RUFFLES. Could you give me the origin of the word "ruffles" as applied to a military drum-beat?

M. L. C.

#### REPLIES

29. INSIGNIA OF A CORNET (II, 174), the Headquarters Troop, 52d Cavalry Brigade (First Troop Philadelphia City Cavalry) is, I believe the only organization in the United States officially allowed to carry a cornet as one of its officers. There is no authorized uniform for a cornet; we, however, have him dress in the uniform of a commissioned officer and wear the insignia of a second lieutenant.

JOHN H. HUNTER  
Assistant Quartermaster,  
F. T. P. C. C.

Regulations of the Headquarters Troop, 52nd Cavalry Brigade, on file at this office, authorized the cornet to wear the insignia of a second lieutenant on both dress and field uniforms.

A. E. DUBois,  
Office of the Quartermaster General.

30. INSIGNIA OF A MILITARY STOREKEEPER (II, 175). The title of Military Storekeeper was created specifically for the late Charles P. Daly, D.S.M., whose picturesque service of over forty years in the Quartermaster Corps in the face of physical handicaps demanded more than the usual rewards. Colonel Daly entered the field service of the Q.M.C. as a teamster, rose to be Chief Clerk of the Office of the Quartermaster General, and during the World War was commissioned Colonel, Q.M.C., National Army. A short notice of his death on November 13, 1926, appeared in *The Quartermaster Review*, January-February, 1927, page 5.

Colonel Daly, to the best of my knowledge, wore only the insignia of his army rank. There is no insignia for a military storekeeper.

Editor, *The Quartermaster Review*.